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FROM

COMMISSIONERS:

TWENTY-FOUR VOLUMES.

—(2.)—

ALKALI ACT (1863);
CHILDREN'S EMPLOYMENT COMMISSION (1862);
COLLIERY EXPLOSIONS; FACTORIES; MINES.

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REPORTS FROM COMMISSIONERS:

1867.

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CHILDREN'S EMPLOYMENT COMMISSION (1862).

SIXTH REPORT

OF

THE COMMISSIONERS,

WITH APPENDIX.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
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SIXTH REPORT OF THE COMMISSIONERS.

On Organized Agricultural Gangs, commonly called "Public Gangs," in some of the Eastern Counties.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

May it please Your Majesty,

AGRICULTURAL GANGS.

1. We were informed by Secretary Sir George Grey, by letter dated the 18th May 1865, that Your Majesty had been pleased to comply with the Prayer of an Address of the House of Lords of the 12th of that month "that Her Majesty would be graciously "pleased to direct that the Commission appointed in answer to an Address of that "House of the 18th February 1862, to inquire into the Employment of Children and "Young Persons in Trades and Manufactures not already regulated by Law, do include "within its inquiries Children and Young Persons employed in some parts of the country "under an organised system of labour known as that of agricultural gangs;" and we received from the Secretary of State Your Majesty's commands that we should make that inquiry, and report to Your Majesty thereon.

2. We therefore, Your Majesty's Commissioners for the purpose above mentioned, humbly present to Your Majesty this report of our proceedings, being the Sixth Report of the Commission.

Counties in which agricultural gangs are used.

3. The system of "organized" labour known by the name of "agricultural gangs" exists, as far as we have been able to ascertain, almost exclusively in the following counties:—

Lincolnshire,
Huntingdonshire,
Cambridgeshire,
Norfolk,
Suffolk,
Nottinghamshire.

There are a few instances of the employment of these gangs in three other neighbouring counties (B 24), namely, in the counties of Northampton, Bedford, and Rutland.

Irregularly distributed through those counties, according to local circumstances.

4. They are not found over the whole of any of these counties, but are distributed irregularly through various parts of them, in obedience to local circumstances.

How gang composed.

5. An organized agricultural gang consists of—
   1. The gang master.
   2. A number of
      (*a.*) Women.
      (*b.*) Young persons of both sexes.
         It will be convenient, in designating "young persons," to adopt the definition of the Factory Acts, namely, those between 13 and 18.
      (*c.*) Children of both sexes from the age of 6 to 13.

Organized gangs more commonly called "public gangs."

6. The "organized gang,"—the subject of the present inquiry,—is called in some districts the "public gang," in others the "common gang;" in some places it is called the "jobbing gang;" elsewhere the "travelling gang." We purpose following in this Report the term "public gang," as perhaps the most usual and the most distinctive.

Number in the public gang.

7. The numbers in each public gang are from 10 or 12 to 20, 30, and 40; very rarely above 40. But the most common, because the most manageable number, is about 20.

Private gangs.

8. In addition to the "public gangs" there are also many "private gangs."

The master of a public gang is an independent contractor.

Private gangs are in employ of farmer.

9. The "public gang" master is an independent man, who engages the members of his gang, and contracts with the farmer to execute a certain kind and amount of agricultural work with his gang. The "private gang" is a small gang, seldom exceeding 12 or 20, similarly composed, but in the farmer's own employ, and superintended and directed by one of the farmer's own labourers.

In some districts public gangs only used; in others both public and private; in some private only.

Public gangs only the subject of this Report.

10. It is important to draw attention to the fact that although the "public gangs" are, under our instructions, the immediate object of our inquiry, there are, in the counties above named, tracts of country where—
   1. Public gangs only are employed;
   2. Both public and private gangs are employed, often on adjoining, and sometimes on the same farms at the same time;
   3. Private gangs only are employed.

AGRICULTURAL GANGS.

The local circumstances which tend to this.

11. The local circumstances which determine the distribution and the use of the public gangs, and which lead also to the employment in some places of both public and private gangs, in other places of private gangs only, are well illustrated by our Assistant Commissioner Mr. Longe, in his report on Lincolnshire (A 24, 34, 35).

Use of each kind of gang illustrated by the case of Lincolnshire.

12. Mr. Longe divides that county in reference to the employment of agricultural gangs into the districts of—1. The Wolds. 2. The Cliff district. 3. The Carr district and Isle of Axholme, and northwards to Gainsborough, Kerton, and Brigg. 4. The Heath district and the Middle Fen district. 5. The South Fen district. A few details relating to these districts respectively will contribute to present a clear view of the causes which have led to the use of the public gangs, and to their irregular distribution in various parts of the same county. The same causes have led more or less to the same results in all the other counties where the agricultural gangs of either kind are in use. (B 170.)

I.—THE WOLDS.

Effect of the old law of Parochial Settlement.

13. This district includes the tract of country between Caistor, Market Rasen, and Louth; about 15 miles by 10. Of this district, Mr. F. W. Iles of Wold Newton states (A 30A), that 50 years ago it was "mostly rabbit warren covered with gorse, thistles and coarse grass." Stimulated by the high price of corn, during the war, the reclamation of these wolds was accomplished very rapidly. "With improved cultivation the demand for manual labour increased, whilst the law of settlement deterred the landlord (generally the sole proprietor of each parish) from building cottages to meet it. On the contrary it was not unusual for cottages to be pulled down with a view of getting rid of poor rates altogether.

> "Thus it came to pass that 'open' parishes such as Caistor, Louth, Binbrooke, and Ludford, always inclined to be overpopulated, became centres from whence farms (nearly all large ones for many miles round) drew their extra, and in numerous cases their ordinary labour also."
>
> "The gang system seems to have sprung up naturally enough under these circumstances."

Light field labour performed by women, young persons, and children from "open" parishes. Public gangs from the "open" parishes.

14. The labourers residing on the farms are called "confined" labourers. They are hired for the most part by the year, and their circumstances are so good that their wives will not go into the fields, and their children are kept longer at school, their girls in many cases not going out to work in the fields at all or only occasionally. The light field labour is therefore done by the public gangs which come from the "open" parishes above-named. According to our returns the greatest numbers of women and children going out from these parishes in the public gangs are approximately as follows:—

From Caistor	60
„ Binbrooke	203
„ Louth	120
	383

As cottages increase in number public gangs are dispensed with.

15. But a large and increasing number of farmers in this district do not employ these public gangs, but have private gangs of their own.

> "Of late years," Mr. Iles states (A 30A), "on estates like Lord Yarborough's, Mr. Angerstein's, and others, in the good management of which great pains have been taken, many more cottages have been built, and on some farms, where, by long continued perseverance, twitch has been all but eradicated, and other weeds reduced to a minimum, it is found quite possible to do without the aid of the gangs."

II.—THE CLIFF DISTRICT, NORTH OF LINCOLN.

The gangs in this district.

16. In contrast to the system of the Wolds of a mixture of public and private gangs, in the Cliff district, to the north of Lincoln, and the parishes northward to Kerton and Brigg, Mr. Longe "did not hear of any common gang being in existence." (A 25, 34, 35.)

Labouring population sufficiently distributed. Private gangs numerous.

The district consists "of arable and pasture land in occupations of moderate size, with a sufficient labouring population distributed among a number of small cottages within a few miles of each other." The quantity of weeding required "is much less than in the fen land." But the employment of children by the farmers themselves, in small gangs or sets, "or under a person employed by them as superintendent," in other words in a private gang, is very great during the spring and summer season.

III.—THE CARR DISTRICT AND THE ISLE OF AXHOLME.

No public gangs.

17. Another contrast with the Wolds is presented by the agricultural district which adjoins the River Trent in the north-west corner of the county. The rich alluvial soil

of this district "affords a great deal of employment for light hands" (A 37). It is owned principally by a number of small freehold farmers or cottagers. There are no public gangs, but women and children are employed, "to a greater extent perhaps than in "any district in the county," either in private gangs under farm labourers on the larger occupations, or in "droves" together under the owners or occupiers.

AGRICULTURAL GANGS.

Many private gangs.

IV.—The Heath and adjoining Parishes south of Lincoln to Sleaford.

18. A great portion of this district consists of what is called the Heath. It has been now for some years under cultivation, for the most part in large occupations. Some portions of it are not yet adequately supplied with cottages. In other portions labour is sufficiently distributed to obviate the necessity for the employment of many public gangs. Private gangs are in very general use throughout the whole of this district during certain parts of the year. (A 40.)

Public gangs not numerous.

Private gangs very general.

V.—The Middle Fen District between Sleaford and Boston.

19. Large farms are not common in this district; much of it is possessed and farmed by small freeholders. "A great part of the land is heavy, and does not require so much "weeding as the fen land generally does; there are, therefore, but few common gangs "in the district." Mr. Longe heard only of six, which go out from Billinghay, and consist of from 150 to 180 women and children in the whole (A 42, a. 150, 162).

Few public gangs.

Land held chiefly by small free holders.

VI.—The South Fen District.

20. Of this district Mr. Longe says (A 45, 46):

"The part of Lincolnshire where the common gang system prevails to the greatest extent, and where it has long obtained an odious notoriety, is that portion of the South Fen district called Deeping Fen. Deeping Fen lies to the south-west of Spalding, between the rivers Glen and Welland. It has been under cultivation since the beginning of the last century, but it is only 30 years since that the application of steam power for draining the land brought the water under complete control and reduced the whole fen into a valuable agricultural district. The parish contains a number of good farm buildings, the farms being generally about 200 to 300 acres. As yet, however, the farmers with a few farm servants are nearly its only inhabitants, there being hardly any labourers' cottages on it, with the exception of the ground keeper's cottage, with which each farm is supplied. Almost the entire district is under tillage, consisting of rich corn-producing land requiring a great deal of labour. Much of this land was formerly in pasture, and has lately been broken up without any additional accommodation for labourers having been supplied. Such being the agricultural condition of the district the farmers are driven to the towns and villages bordering on the fen for whatever labour they can get. Regular day labourers attached to particular farms or employers are almost unknown. The horse work is done by farm servants living in the farmers' own houses or lodging in the few cottages which exist on or near the farms. The rest of the field work is done by 'catchwork' labourers and by gangs of women and children coming from Spalding, St. James' Deeping, Market Deeping, Langtoft, and Baston. One witness says with regard to this district, 'There are, I believe, many occupiers of, perhaps, 300 acres 'of land who have not at this time (about the 14th of December) a single day labourer employed on 'their farms.' (Evid. 157.) A fen farmer himself says, 'I farm 320 acres, all arable land. I have 'not one cottage on my farm. I have only one labourer on my farm now. I have four horsemen 'lodging about. I have no room for more than one in my own house. I have labourers from what'ever place I can get them; they come and go, and we have no hold on them as they are not in 'cottages on the land. We can get light work done by gangs. There are 15 or 16 farms about here 'similarly situated to mine. The labourers we get have to walk four miles from Deeping. Within 'the last six or seven years some of the small owners have built some cottages. The large owners 'have not, hardly any of them.' (Evid. 173.)"

Public gangs very numerous.

21. As nearly as can be ascertained from our returns, the numbers of women and children composing the public gangs which go out from the towns and villages of the South Fen district are as follows:—

Numbers in the public gangs in the South Fen district.

From Spalding:		
In regular gangs - - - - - -	280	380
In occasional gangs - - - -	100	
„ St. James' Deeping and Market Deeping - - -		60
„ Langtoft - - - - - - - -		42
„ Baston - - - - - - - -		40
„ Pinchbeck - - - - - - -		30
„ Crowland - - - - - - -		100
„ Bourn - - - - - - - -		90
„ Gedney Drove End - - - - - -		40
		782

AGRICULTURAL GANGS.

Private gangs also numerous.

22. Throughout the whole of this large district there are also many farmers who have private gangs, especially those who are nearest to the above-mentioned villages and towns. Numerous private gangs are employed on the farms around Crowland (A 67); also in the neighbourhood of Holbeach, Long Sutton, and Tydd St. Mary (a 191, 192, 196).

Similar distribution of public and private gangs throughout the other counties included in the inquiry.

23. The instance of Lincolnshire, which we have given somewhat in detail, exemplifies more or less clearly the intermixture of both public and private gangs, either in the same or over adjoining districts, which is found in all the other counties and portions of counties where the public gangs exist (B 170–6).

Circular of inquiries widely distributed.

24. Our circular of inquiries (Appendix, p. 150) was very widely distributed by our Assistant Commissioners, Mr. Longe and Mr. White, in the respective districts which were assigned to them, to all classes of persons likely to be able to afford useful and trustworthy information.

Returns sufficient for statistics of public gangs in certain places. Returns in Mr. Longe's district.

25. Fifty of these circulars were filled up and returned in Mr. Longe's district. Of the persons making them, 20 confined themselves to statements of a general character. The returns of the 30 enabled Mr. Longe to construct the following table:—

APPROXIMATE NUMBERS in the PUBLIC GANGS which were stated to go out from or to be employed in the following Parishes and Localities in Mr. LONGE'S District.

Numbers in the Public Gangs which go out:

In the Wolds:—			
From Caistor		60	
,, Binbrooke		203	
,, Louth		120	
In the Heath District		60	
In the Middle Fen District		180	
In the South Fen District:			
From Spalding—			
In regular Gangs	280	380	
In occasional Gangs	100		
,, Market Deeping ,, St. James's Deeping		60	
,, Langtoft		42	
,, Baston		40	
,, Pinchbeck		30	
,, Crowland		100	
,, Bourn		90	
,, Gedney Drove End		40	
			1405
Northamptonshire			60
Huntingdonshire:			
From Yaxley		161	
,, Stilton		40	
,, Ramsey and R. ,, Ramsey St. John		220	
,, Warboys		60	
,, Somersham		50	
			531
Cambridgeshire:			
From March		388	
,, Doddington		222	
,, Benwick		65	
,, Chatteris		260	
,, Ely		36	
,, Soham		270	
,, Manea		40	
,, Sutton		40	
,, Wicken		65	
			1,386
In Mr. Longe's District			3,382

Returns in Mr. White's district.

26. The returns relating to about 50 parishes in Mr. White's district give the following as the estimated or approximate numbers of children, young persons, and women employed in gangs in or from those parishes. Gangs stated to be, or which there is any reason to believe to be, private gangs are omitted, with the exception referred to in the note * on next page.

AGRICULTURAL GANGS.

Parishes.	Estimated Number employed in Public Gangs.	
Norfolk.		
Haverland and Reepham	30	
Sedgeford and adjoining parishes	30	
Tittleshall	25	
Weasenham All Saints	*30	
Great Dunham	15	
Harpley and Rudham	40	
Grimston	60	
Middleton	35	
Welney	80	
Hilgay	23	
Downham Market	†25	
Stowe-Bardolph and Wimbotsham	60	
Fincham	36	
Swaffham	50	
Necton	20	
Great Cressingham	30	
Ashill	65	
Breckles	35	
Wicklewood	26	
Kimberley and adjoining Parishes	†20	
East Harling	103	
Burston	12	
Shelfanger	11	
Gayton	†56	
Walpole St. Peter	24	
Hockham	15	
		956
Suffolk.		
Eye	20	
Stradbroke	35	
Witnesham	35	
Hemingstone	14	
Debenham	54	
Coddenham	17	
Wortham	60	
Fressingfield	16	
Wingfield	13	
Winston	15	
Honington	†10	
Leiston	25	
Friston cum Snape	26	
Denham	19	
Framsden	35	
Laxfield	21	
Westleton	40	
Wilby	20	
Tuddenham	†25	
		500
Cambridgeshire.		
Parsondrove		50
Northamptonshire.		
Eye		71
Nottinghamshire.		
Pleasely Hill	22	
Mansfield Woodhouse	16	
		38
		1,615

Numbers returned subject to variations.

27. In giving the figures of these returns we are aware that the numbers are subject to considerable variations at different periods of the year. The fact which is shown approximately by them is the numbers of children, young persons, and women who, with a small proportion of adult males, compose the public gangs in the parishes and localities specified, according to the estimate of the persons making the returns in each case.

28. From the table constructed by Mr. White in his Report (B 49), in which he states the results in his district,—partly from the returns as far as they were given in detail, partly by computation founded upon them,—it appears that the numbers arrived at are 20 males and females under 7, and 1,616 between 7 and 13; together with 922 between

---

* This number includes a private as well as a public gang, the numbers of which are not given separately.

† These numbers are arrived at by splitting the difference between the outside numbers, where those only are given, *e. g.*, "from 20 to 30" is put here as 25.

AGRICULTURAL GANGS.

13 and 18, and 458 (*i.e.*, 70 males and 388 females) above the age of 18. But Mr. White adds (B 52), that these numbers "are some way within the actual numbers which would "be shown by complete returns."

Approximate estimate of total numbers.

29. Although, therefore, it is not in our power to give accurate statistics of the number of persons employed in these public gangs in the counties where they exist, the materials furnished by our Assistant Commissioners enable us to present the following as an approximate estimate of the total numbers, subject to the variations adverted to in S. 27.

Persons employed in the public gangs:—

In Mr. Longe's district - - - -	3,382
In Mr. White's district - - - -	3,017
	6,399

Relative proportion in which children, young persons, and women are employed in the public gangs.

30. In our circular we inserted a form in which the age and sex, as well as the numbers, might be specified; but it was not always filled up, doubtless from inability to ascertain the facts correctly. It was so, however, in a sufficient number of instances to afford a general idea of the relative proportion in which children, young persons, and women are usually mixed together in these gangs.

31. NUMBER, SEX, and AGE of PERSONS employed in PUBLIC GANGS in or from the following PARISHES in Mr. LONGE'S DISTRICT, when the Returns were made.

Parish.	Males.					Females.						Total Males and Females.
	Under 7.	Between 7 and 13.	Between 13 and 18.	Over 18.	Total Males.	Under 7.	Between 7 and 13.	Between 13 and 18.	Over 18. Married.	Over 18. Unmarried.	Total Females.	
LINCOLNSHIRE.												
Binbrooke - -	—	39	3	10	52	—	42	34	85		161	213
Withcall - -	—	Few	6	—	6	—	8	8	10	10	36	42
Spalding - -	—	37	21	—	58	—	25	31	30		86	144
Bourne - -	—	40		—	40	—	50		—	—	50	90
Langtoft - -	—	16	2	—	18	—	8	14	2	—	24	42
HUNTINGDONSHIRE.												
Yaxley - -	2	55	40	—	97	3	26	25	—	10	64	161
Stilton - -	4	10	5	—	19	1	12	5	—	3	21	40
Warboys - -	—	50	—	—	50	—	80	70	30	40	220	270
CAMBRIDGESHIRE.												
March - -	—	105	64	2	171	—	78	72	47	20	217	388
Doddington - -	—	45	44	—	89	—	37	57	13	26	133	222
Benwick - -	—	25	15	—	40	—	15	10	—	—	25	65
Chatteris - -	—	60	20	—	80	—	80	46	27	26	180	260
Messal - -	2	15	18	3	37	—	10	12	8	6	36	73
Soham - -	—	85	50	—	135	—	25	60	40	10	135	270

NUMBER, SEX, and AGE of PERSONS employed in PUBLIC GANGS in or from the following (about 40) PARISHES in Mr. WHITE'S DISTRICT, as stated or estimated in the Returns.

Parish or District.	Males.					Females.						Total Males and Females.
	Under 7.	Between 7 and 13.	Between 13 and 18.	Over 18.	Total Males.	Under 7.	Between 7 and 13.	Between 13 and 18.	Over 18. Married.	Over 18. Unmarried.	Total Females.	
NORFOLK.												
Tittleshall - -	—	7	3	—	10	—	6	5	3	1	15	25
Weasenham all Saints	—	3	—	—	3	—	15	5	7	—	27	*30
Great Dunham -	—	6	—	—	6	—	3	2	2	2	9	15
Grimston - -	—	15	15	—	30	—	15	15	3	2	35	65
Middleton - -	—	4	6	7	17	—	4	2	16	3	25	42
Welney - -	—	20	10	—	30	—	10	20	20	—	50	80
Hilgay - -	—	7	—	—	7	—	5	—	7	4	16	23

* This number includes a private gang.

NUMBER, SEX, and AGE of PERSONS employed in PUBLIC GANGS in Mr. WHITE'S DISTRICT—*continued.*

Parish or District.	Males.					Females.						Total Males and Females.
	Under 7.	Between 7 and 13.	Between 13 and 18.	Over 18.	Total Males.	Under 7.	Between 7 and 18.	Between 13 and 18.	Over 18. Married.	Over 18. Unmarried.	Total Females.	
Stowe Bardolph and Wimbotsham.	—	16	2	—	18	—	16	12	4	10	42	60
Fincham - -	—	16	8	6	30	—	8	4	10	2	24	*54
Swaffham - -	—	15	15	—	30	—	10	10	—	—	20	50
Ashill - -	—	8	2	—	10	—	8	12	19	16	55	65
Breckles - -	—	10	8	—	18	—	10	7	—	—	17	35
Wicklewood - -	—	6	—	—	6	—	3	6	9	2	20	26
East Harling -	—	23	14	24	61	—	30	18	13	5	66	127
Kenninghall - -	—	—	20 or 30	5 or 6	30 to 40	—	—	10 to 15	15	—	20 to 30	50 to 70
Burston - -	—	3	1	1	5	—	4	1	2	1	8	13
Shelfanger - -	1	—	—	—	1	1	5	—	3	1	10	11
Gayton - -	—	10 to 12	—	—	10 to 12	—	10 to 12	12 to 15	15 to 20	6 to 8	40 to 50	50 to 62
SUFFOLK.												
Eye - - -	—	15	5	—	20	—	—	—	—	—	—	20
Stradbroke - -	—	25		—	25	—	10		—	—	10	35
Witnesham - -	—	13	5	—	18	—	13	4	—	—	17	35
Hemingstone - -	—	7	—	—	7	—	7	—	—	—	7	14
Debenham - -	1	14	3	—	18	—	5	25	3	3	36	54
Coddenham - -	—	8	4	3	15	—	3	2	—	—	5	20
Wortham - -	—	25	6	—	31	—	21	8	—	—	29	60
Fressingfield -	—	4	—	—	4	—	12 or 10	—	2	—	12 or 14	16 to 18
Wingfield - -	—	2	1	1	4	—	6	2	1	1	10	14
Winston - -	—	4	—	—	4	—	8	—	—	3	11	15
Honington - -	—	—	5 to 7	7 to 10	12 to 15	—	—	3 to 5	—	—	3 to 5	15 to 20
Leiston - -	—	1	2	—	3	—	5	7	9	1	22	25
Friston-cum-Snape -	—	6	6	—	12	—	5	5	3	1	14	26
Denham - -	3	4	2	1	10	4	3	1	1	1	10	20
Framsden - -	—	15	—	—	15	—	10	5	—	5	20	35
Laxfield - -	—	14						7 Children			7	21
Westleton - -	—	16	—	—	16	—	24	—	—	—	24	40
NORTHAMPTONSHIRE.												
Eye - - - -	5	35	1	1	42	—	26	4	—	—	30	72
NOTTINGHAMSHIRE.												
Pleaseley Hill - -	—	9	—	—	9	—	11	2	—	—	13	22
Mansfield Woodhouse	—	5	11	—	16	—	—	—	—	—	—	16

Character of public gangmaster.

32. In a small number of instances the description given in the evidence and in our returns of the general character of the public gangmasters, was favourable; in the rest it was very much the contrary. The public gangmasters are usually described as men whom the farmers are not willing to have in their regular employ; men who belong to the class of "catchwork labourers;" in most cases men of indolent and drinking habits, "and in some cases men of notorious depravity;" as a rule, unfit for the office they undertake (A 19; a 24A, 157, 230, 237, 240, 253; B 102, 157, 159, 161). Their influence is represented as very pernicious to the moral principles and conduct of the children and young persons of both sexes under their management. They are very rarely men capable or desirous of exercising a beneficial influence over those under them, whether while they are at work or on their way to and from their work, at which latter times the absence of all moral control is universally recognized as especially injurious (a 226, 251).

The kind of work he contracts to do.

Excessive labour of his gang the chief source of his profits.

33. The gangmaster is engaged with his gang more or less during the greatest part of the year, although continuous employment for young children seldom exceeds six months (A 18). The work varies with the different months, but consists principally in weeding corn and other crops, picking twitch, singling turnips, setting potatoes, picking stones, spreading manure, topping and tailing mangolds and turnips, and other work of the like kind (A 6; b 1). Sometimes he is paid by the day, but generally by the piece. At best his net earnings, after paying his gang, are small, being little more than those of the common labourer in steady employ (A 10, 11; B 60). His

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* This number includes a private gang of 12 persons.

"principal source of gain" is piece work, which seems essential to rendering his trade a profitable one (A 11). In executing work by the piece his vigour as a taskmaster comes into play, and he makes his profit "partly by pressing his gang to the utmost of "their strength, and partly by a hasty and imperfect performance of his work" (ibid). Although the evidence does not disclose many instances of the use of personal chastisement to the children, it is everywhere apparent that the vigilance and energy of the gangmaster are continually exerted to keep the children, and also the women, up to their work. Hence the different members of the gang, especially the children, are often subject to an excessive amount of labour and other hardships (a 7, 9, 14, 32, 187, 216A, 235, 301; B 79–87).

The composition of the gang.

34. The usually low moral character of the gangmaster is naturally reflected in the ordinary composition of his gang. The "characteristic type" is described as being given to it by the presence among the young or adult women belonging to it of those who have forfeited their chance of better employment, or whose habits are coarse and irregular. With these are youths who have probably been brought up in the system from their tenderest years, who have therefore lost all opportunities of early instruction, and who have been hardened by early association with vice. These may be said to compose about one half of each gang. The remaining half consists of children and young persons of both sexes, from the age of 6 to that of 18; many of them children of respectable labourers and others who are quite conscious of the pernicious consequences to their offspring of such association, and who in many instances allow them to be subjected to it with the greatest reluctance. On the other hand, "it is too often "the practice for parents to make the employment of their younger children the condition "on which the gangmaster may have the older ones" (a 163, 249; B 152, 63).

Ages of children.

Hours of work and meal times. Distance to place of work.

35. Considering the ages, as shown by the above table, at which children commonly begin gang work, their hours of work, of rest for meals, and the distances they travel to and from their work are important elements in this subject. Some instances are recorded in the evidence of children as young as 6 years being or having been employed in these gangs (a 216; B 35, 36). Considerable numbers of them are shown to be thus employed at the ages of 7, 8, and 9 (a 174, 26, 39, 73, 91, 94, 154, 176, 240; B 31–8). Their hours of work are in some places from 8 a.m. to 6 p.m. in summer, and to 5 p.m. in autumn; in others from 5 a.m. to 7 p.m., including the time occupied in going and returning (a 5, 74, 80, 113, 131, 153, 187, 216; B 75). Under other masters the time of actual work is about eight hours (ibid). The distances to which these young children, together with the rest of the gang go to their work, sometimes amounts to five, six, or even seven miles. In such cases the journey to and fro must entail on the children three or four hours additional labour, even supposing the time spent in the field to be reduced by one or two hours (A 22; a 247; B 83). In very rare instances they receive assistance in the way of conveyance, for either a part or the whole of those distances, from carts or waggons sent for them, or donkeys provided by the gangmaster, on which the smaller ones may ride by turns.

Injurious physical results.

36. It has been seen that the interest of the gangmaster leads him to keep the whole of his gang at full stretch while at their work, with the shortest possible intervals of interruption. When to this is added the length of the walk to and from their work, it will be evident that this mode of employment must impose upon the young and the feeble a vast amount of fatigue, often to the point of entire exhaustion (a 159; B 86). To those of the strongest constitution among the boys and youths this may be attended with no permanent ill effects; but in the opinion of medical men, and of other competent observers, it often lays or developes the seeds of illness and of premature decay in those of weaker frame (b 1; B 126, 128). In the case of the girls there can be no doubt of its injurious tendencies and results in a physical point of view in very many instances (a 160, 181, 235A; B 118, 128–134).

Instances.

37. A few extracts only from the evidence are necessary as examples. The following is recorded by Mr. Longe:—

> "*Statement of Mrs. Anthony Adams, labourer's wife, of Denton, Huntingdonshire* (a 216A).—In June 1862 my daughters Harriet and Sarah, aged respectively 11 and 13 years, were engaged by a ganger to work on Mr. Worman's land at Stilton. When they got there, he took them to near Peterborough; there they worked for six weeks, going and returning each day. The distance each way is eight miles, so that they had to walk 16 miles each day on all the six working days of the week, besides working in the field from 8 to 5 or 5½ in the afternoon. They used to start from home at 5 in the morning, and seldom got back before 9. They worked at first on Mr. Wyman's farm, close to the 'Peacock' inn, as you enter in for Peterborough, and afterwards they worked at Stanground. Sometimes they were put to hoeing, sometimes to twitching, and they had 7*d.* a day. They had to find all their own meals, as well as their own tools (such as hoes). They (the girls) were good for nothing at the end of the six weeks. They were very quick to work, and the ganger never gave them the stick.
>
> "I never heard of his treating them with any impropriety. It was a mixed gang, but the boys were not very big. The ganger made a great fuss to have my children, because they were so quick in the

work, and he persuaded me to send my little girl Susan, who was then six years of age. She walked all the way (8 miles) to Peterborough to her work, and worked from 8 to 5½ and received 4*d.* She was that tired that her sisters had to carry her the best part of the way home—8 miles, and she was ill from it for three weeks, and never went again."

Mr. White gives the following summary of a portion only of cases of a like kind (B 86).

> " Some instances are taken from different neighbourhoods and counties, and others of a like kind might be added. A gangmaster employing young children, and having had some as young as 7 or 6 years, used to take his gang to one or two farms six miles off, and two or three times some of the children came a distance of seven or eight miles. To another place "he had had a boy 7 or 8 years and " a girl of 9 come six miles." A gangmaster in another place "had one or two children of 8 years old, " walk five miles out and five back." Elsewhere a woman, whose children began young, some before 7 years old, says, 'Some of mine have gone four, five, six, and seven miles off,' and adds that the little ones, down to those at 4*d.* a day, have to go, 'Not but what the little ones have all the same steps to ' set as the great, and all the same yards and miles to go.' *A boy 5 years old* used to be carried home from his work by the others. And elsewhere 'You see the big ones come dragging the little ' ones home, and sometimes taking them on their backs when they are overtired.' A mother says of her boy that he had been six miles and further to work, and had come home so tired that he could scarcely stand; and that they had also had to send out late in the evening to look for him as he did not come home, ' and had found him dropped asleep in a cowshed.' "

Injurious moral results.

38. Of the bad moral results from the intermixture of the sexes in groups of the kind described, under no proper control, and receiving their general impressions from a nucleus of characters already corrupted, the testimony is universal (a 6, 14, 19, 156, 158, 159, 160, 174, 177, 181, 196, 230, 235a, 249; B 135, 144–7).

This outline sufficient as introductory to the consideration of the remedies. The Reports of the assistant Commissioners supply full details of the facts of the case.

39. The above outline of the public gang system is sufficient in this place as a description of its general features, and as introductory to the consideration of any remedies that may appear expedient or practicable. The reports of our Assistant Commissioners, Mr. Longe and Mr. White, present so comprehensive and complete a view of the whole subject that we deem it unnecessary to enlarge this Report by repeating details which their reports and evidence so fully supply.

40. The unanimity with which the public gang system is condemned in consequence of its injurious influences on the moral character of those subject to it is all but entire throughout the whole evidence. The number of persons who are able to speak well of the system under its moral aspects, as far as they have witnessed it, is very small indeed. The rest, with an earnestness of expression which testifies to the sincerity of their convictions, are evidently deeply impressed with the desire to call attention to the great amount of moral evil connected with the system, and to urge the consideration of some mode of improving it.

General desire to apply remedies, and general concurrence in the kind of remedies required.

Specific recommendations numerous from a great variety of persons.

41. It is satisfactory to find from the evidence that the desire to apply a remedy to the evils of this system is as widely felt and as decidedly expressed as is the condemnation of the system, and that there is a very general concurrence in the leading outlines of the remedies proposed. Specific recommendations were made and placed in the hands of our Assistant Commissioners by the large number of persons named below in the order in which they occur in the evidence. Some,—as b 68, 105, 229, and 235,—are the result of the deliberations of considerable bodies of clergy and others, and the rest proceed from individuals well entitled to speak for their respective localities.

List, in the Order in which they occur in the Evidence, of Persons who have made Specific Suggestions for the Regulation of the Public Gangs by Legislative Enactment.

Name.	Address or Designation.	No. in Evidence.
Robert Everard, Esq.	Spalding	a 155
W. Wells, Esq.	Holme	a 219
The Rev. Ch. Birch	Rector of Sawtrey	a 227
The Rev. W. Collins	Incumbent of Ramsey St. Mary	a 230
Charles P. Tebbutt, Esq.	Bluntisham	a 234
Captain J. W. Forster	Chief Constable	a 237
The Rev. E. Wells	Curate of Sawtrey	a 239
The Rev. M. A. Gathercole	Vicar of Chatteris	a 249
The Rev. Bircham Houchen	Chaplain of Swaffham Prison	b 9
Capt. H. S. Adlington	Magistrate	b 40
The Rev. H. Milne	Rector of Holme Hale	b 41
The Rev. W. Hilton Hutchinson	Rector of Welney	b 48
Mr. F. Robinson	Southery	b 59
Mr. Jas. Cobon	Well Hall, Gayton	b 62
Mr. J. Freeman	Tenant to the Prince of Wales	b 69
The Rev. W. F. Welch	Vicar of Stradsett	b 70

LIST, in the ORDER in which they occur in the EVIDENCE, of PERSONS who have made SPECIFIC SUGGESTIONS for the REGULATION of the PUBLIC GANGS by LEGISLATIVE ENACTMENT—*continued.*

Name.	Address or Designation.	No. in Evidence.
The Rev. Hinds Howell	Rector of Drayton	b 76
Lord Walsingham	Merton Hall, Thetford	b 78
Mr E. Fellowes	M.P. for Huntingdonshire	b 79
Mr. Jas. Everett	North Creake	b 80
Mr. J. Hastings	Longham	b 84
The Rev. E. Montague Hare	Little Dunham	b 86
The Rev. J. Rowlands	Rector of Grimston	b 89
The Rev. W. Hilton Hutchinson	Rector of Welney	b 93
The Rev. E. C. K. Bearcroft	Curate of Downham	b 95
The Rev. W. Blyth	Rector of Fincham, and Rural Dean	b 98
The Rev. Salisbury Everard	Vicar of Swaffham	b 99
The Rev. Bircham Houchen	Chaplain to Swaffham Prison	b 100
The Rev. W. H. Walker	Rector of Necton	b 102
The Rev. Charles Taylor	Rector of Cresingham	b 103
The Rev. W. H. Parker	Rector of Saham Toney	b 105
Mr. Thos. Barton	J.P. for Norfolk	b 106
The Rev. George Crabbe	Rector of Merton	b 107
The Rev. Thos. B. Wilkinson	Rector of East Harling, and Rural Dean	b 111
The Rev. H. Temple Frere	Burston	b 113
The Rev. W. Page Roberts	Vicar of Eye	b 128
Mr. Hugh Cawley	Helmingham	b 131
The Rev. Jno. C. Ryle	Vicar of Stradbroke	b 142
The Rev. W. Potter	Diocesan Inspector of Schools, and Rural Dean	b 143
The Rev. R. Longe	Vicar of Coddenham	b 146
Mr. Thos. Mathews	Farmer, Newton by Castle Acre	b 164
The Rev. Thos. Hutton	Rector of Stilton	b 166–7
Mr. Alfred Adney	Surgeon, Whittlesea	b 168
Mr. G. M. Smith	Clerk to the Justices, Whittlesea	b 171
The Rev. W. B. Hopkins	Late Vicar of Wisbeach	b 172–3
Mr. Jno. Moyes	Potato Dealer, Long Sutton	b 172b
Mr. R. P. Nisbet	Land Agent to the Duke of Bedford, Thorney	b 174
Mr. J. Peck	Farmer, Parsondrove	b 188
Mr. Ben. Stockden	Farmer, Fridaybridge	b 194
Mr. Chs. Sharpe	Farmer, Outwell	b 197
Thos. Bowker, Esq.	Magistrate for Isle of Ely	b 201
Dr. C. T. Harding	Medical Officer of District, Whittlesea	b 202
Wm. Whitting, Esq.	Magistrate for the Isle of Ely	b 203
Rev. Hugh Pigot	Vicar of Wisbeach St. Mary's	b 204
Mr. H. West	Upwell	b 206
Rev. Samuel Charlton	Incumbent of Fridaybridge	b 207
Rev. Fred. Jackson	Incumbent of Parsondrove	b 210
Mr. Jno. Harris	Schoolmaster, Eye, Northamptonshire	b 213
Rev. A. W. Worthington	Mansfield	b 220–1
Mr. Wm. Hollins	Manufacturer	b 221
Report of Meeting of Diocesan School Inspectors.	Norwich	b 229
Proposed Petition to the House of Commons.	From 30 clergymen	b 235
Mr. G. M. Smith	Justice's Clerk for Whittlesea	b (171)251
Mr. E. S. Oldham	Wisbeach St. Mary's	b 253

Their conclusions entitled to great weight.

Unanimous agreement on certain points; and others suggested.

42. The conclusions arrived at by such a number of gentlemen of various occupations and positions in so many different localities throughout the counties of Lincoln, Cambridge, Huntingdonshire, Norfolk, and Suffolk, are manifestly entitled to great weight, and afford most important aid towards determining what, on a full consideration of the whole of the evidence, would appear to be the most expedient and practicable remedies. There are some points on which there is an unanimous agreement. All think 1. That the gangmaster should be licensed. 2. That the sexes should be separated. 3. That the age at which children should be allowed to go out to work in the public gangs should be limited. Some think that the distance to which the children should be taken to work should be limited according to their age; and that their hours of work should also be subject to regulation. In the opinion of some, security should be taken that these children should not be entirely deprived of opportunities of education.

A careful review of the evidence leads us to submit the following recommendations.

43. On carefully weighing the recommendations of the numerous persons above-named, in conjunction with the entire evidence, they appear to us to lead to the following recommendations which we beg to submit as capable, if adopted by Parliament, of putting an end to much of the physical suffering and moral evil now accompanying the gang system, and of raising the moral and intellectual character of the young engaged in this mode of agricultural employment.

Agricultural Gangs.

RECOMMENDATIONS.

I. As to requiring that the Gangmaster should be Licensed.

(*a.*) Every public gangmaster, *i.e.*, every person hiring the services of any child, young person, or woman, and letting out their services in agricultural labour (A 7, 8, 9; B 7, 8; b 172a) should be required to take out a licence.

(*b.*) Licence to be granted by the magistrates in Petty Sessions, the conditions on which it is granted being first endorsed thereon. (b 171.)

(*c.*) No licence to be granted unless applicant produces a certificate of character from three householders, two of whom must be guardians of the poor; and unless the magistrates granting it are satisfied of the fitness of applicant, in point of good conduct and temper, to be entrusted with the management of children.

(*d.*) Licence to be granted for one year.
Cost of licence not to exceed 2*s.* 6*d.*

(*e.*) No licence to be granted to any person who keeps a beerhouse, or public-house, or is otherwise licensed to sell beer or spirits. (a 156, 234, 239.)

(*f.*) Gangmaster to undertake,

1. To pay the members of his gang, or the parents of the children in his employ, their wages before 8 o'clock p.m. in summer, or 7 o'clock p.m. in winter, on some certain day of the week, at his private residence, or some other private place, and never at a tavern, alehouse, or beerhouse. (b 171.)
2. Not to employ any child or young person who is sickly, or otherwise physically incapable of the required amount of labour without undue strain or suffering.
3. To preserve orderly and decent conduct in his gang.

(*g.*) Licence may be revoked by magistrates in case of personal misconduct of gangmaster, or of his neglect of any of the regulations prescribed as the conditions of obtaining his licence endorsed thereon.

(*h.*) Licence to be produced to farmer on every occasion of gangmaster bringing his gang to work, or to any magistrate or guardian of the poor for the district requiring to see the same. (b 172a.)

(*i.*) Any person acting as a public gangmaster without licence, and any person employing a public gangmaster not possessing a licence, to be liable to a fine of not less than 5*l.* and not exceeding 10*l.*

II. (*a.*) Age at which Children may be employed in a Public Gang. (*b.*) Exclusion of Females, partial or entire, from working in a Public Gang.

44. On these points there is much variety of opinion in the evidence. The 30 clergymen who signed the petition to the House of Commons (b 235) pray that "No children "should be employed (in a public gang) under 10 years of age." In this several gentlemen who make their individual suggestions concur. Others think that no boy should be so employed under the age of 12 years. Some are of opinion that the age for boys should be 10 and for girls 12 or 13 or even 14 (a 11, 23, 24, 227, 234). Many are desirous that all girls (a, 27, 32, 114, 115, 179, 196), some that all females (a 78) should be excluded from the public gangs altogether.

45. This variety of opinion arises in great part from the variety of circumstances under which the question presents itself.

46. In some localities the supply of boys for this species of work is large enough to permit the exclusion of all under 10, or even under 12 years of age, from the public gangs, without the risk of inconvenience to the farmer. In others the labouring population is so distributed that there may be no pressing need for the employment of females in the ordinary work for which gangs are used. In some districts the labourers are so well off that the females are for the most part indisposed to work in the fields, and their place is supplied by males. Their exclusion from the gangs, therefore, would not in such cases be attended with inconvenience.

47. The evidence appears to us to justify the recommendation that it should be enacted that no boy under 8, and no girl under 12 years of age should be employed in a public gang.

48. But in regard to children above those ages, we are of opinion that any legislative regulations should be of such a kind as to allow of their being adjusted to the special circumstances of each locality.

AGRICULTURAL GANGS.

49. In this, therefore, and in three other points remaining to be mentioned, (SS. 53, 58, 72,) we think that a discretionary power should be left to the magistrates granting the gangmaster's licence, to determine which of several alternative regulations should be adopted in each particular instance; and the regulations determined on should thereupon be endorsed on the licence.

50. We therefore recommend that the magistrates granting the gangmasters' licence should be empowered to determine, according as they may deem most suitable to the circumstances of the locality, upon either of the following alternative regulations:

(*a.*) That no boy under the age of	9	Should be employed in a public gang.
(*b.*) „ „	10	
(*c.*) „ „	11	
(*d.*) „ „	12	
(*e.*) „ „	13	
(*f.*) That no girl under the age of	13	
(*g.*) „ „	14	
(*h.*) „ „	15	
(*i*) „ „	16	
(*j.*) „ „	17	
(*k.*) „ „	18	
(*l.*) That no female above the age of and under the age of	18	
(*m.*) That no female above the age of	18	
(*n.*) That no female		

51. This power of adopting regulations suitable to the particular case would, if granted to magistrates in this instance, be analogous to the power granted by the Factory Acts Extension Act (27 & 28 Vict. c. 48. s. 5.) to the occupier of any factory to make special rules, to be certified under the hand of the inspector of factories of the district, for compelling the observance of certain requirements of that Act.

III.—DISTANCES TO WHICH THE CHILDREN AND YOUNG PERSONS IN PUBLIC GANGS SHOULD BE ALLOWED TO GO TO THEIR WORK.

52. It is suggested by several witnesses that if young children continue to be employed in the public gangs they should be protected from the cruelty to which many of tender age are now subjected, of being obliged to walk two, three, four, sometimes as far as six or seven miles to their place of work in the morning, and then to walk back again after several hours active exertion, with very little intermission, in the fields. One of the suggestions of the proposed petition to the House of Commons, above referred to (b 235), is that some limitation of distance in proportion to age should be adopted.

53. We therefore submit that it should be enacted that no boy between the ages of 8 and 10 and no girl below the age of 13, should be allowed to be taken to work in a public gang, a greater distance than one mile from its home; and that in regard to boys above the age of 10, and young persons, it should be in the discretion of the magistrates to adopt any distance within the limitations in reference to age, below indicated, that they may deem most suitable; and that they should be required to endorse the same on the gangmaster's licence, as above mentioned.

No boy of - -	10 years of age and under 11	to be taken to work in a public gang beyond a distance from his or her home of	2 miles.
	11 „ „ 12		
	12 „ „ 13		
No young person of	13 „ „ 14		3 miles.
	14 „ „ 15		
	15 „ „ 16		4 miles.
	16 „ „ 17		
	17 „ „ 18		

54. The proposed petition to the House of Commons above referred to (b 235), in praying that the distance to which children in the public gangs should be allowed to travel to the place of work should be limited, suggests that the limitation should apply only in the case of the children travelling "on foot." We have not deemed it advisable to include those words in our recommendation. The evidence shows that it is very rare for the gangmasters or the farmers to aid the children in getting to their place of work, by carts or other conveyances. The weaklier members of the gang may sometimes be aided for a portion of the distance in this or some other manner, but any regulations in regard to distance, in which exceptions were admitted, would be very liable to evasion.

IV. HOURS OF WORK FOR CHILDREN AND YOUNG PERSONS.

55. We are of opinion that no child should be employed in a public gang for a period longer than 8 hours in any one day, including the time occupied in going to and returning from the place of work, and including one hour for rest and refreshment after the first 3½ hours; and that no young person should be employed in a public gang for a period longer than 12 hours in any one day, including the time occupied in going to and returning from the place of work, and one hour for rest and refreshment in the middle of the day (B 94). Such a regulation would be in strict analogy with the requirements of the Factory Acts in protecting the young from excessive labour.

V. AS TO THE SEPARATION OF THE SEXES IN A COMMON GANG.

56. It is strongly and uniformly insisted upon throughout the evidence that whenever females are employed in public gangs they should not be allowed to work in the same gang with males, unless subject to some regulation (a 28, 31, 148, 151, 154, 156, 158, 160, 162, 164, 184, 188, 195, 202, 203, 211, 226, 231, 252, 260, 261, 262, 273; B 147–151). At the same time it is made evident by abundant testimony that, injurious as work in the fields in the public gangs is to female delicacy and morality, more injury arises to both during the times of going to and returning from work (a 156, 157). It would clearly be most desirable, in the interests of morality, that whenever it should be found possible,—as might be the case in some districts,—without any serious inconvenience to the processes of agriculture, to exclude females altogether or young females above the age of 13 years from employment in the public gangs, the discretion proposed to be given to the magistrates to do so (S. 50) should be exercised. But where it should be thought expedient to permit the employment of females in these gangs, we are of opinion that the magistrates should be empowered to order that, if in any gang, any male person above the age of 15 be employed, it should be unlawful to employ any female above the age of 13 in the same gang, except under the regulation as to a female superintendent adverted to in the next paragraph.

VI.—AS TO A FEMALE SUPERINTENDENT OF GANGS IN WHICH FEMALES ARE EMPLOYED.

57. We think that good ground is shown for the opinion held by several witnesses (a 250, 305, b 171), that whenever females are employed in any public gang, it would be desirable to require that a respectable woman, whether managing the gang herself, or under a gangmaster, should be licensed in the same manner as the gangmaster.

58. It appears that efforts have in some instances been made to substitute women for men as managers of gangs; but it has been found that women very rarely possess sufficient vigour and authority to enforce the requisite attention and activity in all the members of the gang while at work (a 177, 215; B 166). Although not suited to have the exclusive management of a gang, a respectable woman would doubtless be of great service in preserving order and propriety, and in shielding the young from the dangers to which they are necessarily exposed in the course of their often long walks, at early morning and late in the evening, in going to and returning from work, as well as in the intervals of rest and refreshment during the day, when it is plain, from the evidence, that the congregation of the young of both sexes, without any proper control, is the source of much evil. Where the gangs are small in number, and subject to much fluctuation in the times and places of employment, such an arrangement would be too onerous to enforce. But where the system is fully organized and the gangs are in constant and regular employ during large portions of the year, it does not appear that it would impose any undue restriction upon the gangmaster if power were given to the magistrates to require that, in every case in which the gangmaster applies for a licence to employ a mixed gang, in which he proposes to employ any male above the age of 15, and any female above 13, he should also apply for a similar licence for a woman, and that he should be liable to a penalty for each time that he took such mixed gang to or from their work, or employed such mixed gang at any field work, unaccompanied by the woman so licensed. As the woman would work with and as one of the gang, the requirement of a licence would impose no pecuniary burden upon the gangmaster beyond the small cost of the licence.

VII. AS TO THE FEMALES IN A GANG ENTERING HIGH WET CORN IN WEEDING.

59. Among the causes of suffering most earnestly complained of by the female witnesses who have worked in the public gangs is the practice of being taken into high wet corn for the purposes of weeding (a 195; B 70, 71, 129.)

AGRICULTURAL GANGS.

60. As by the Factory Act (7 Vict. c. 15. s. 19.) it is provided that "No person under " 18 years of age, and no woman, can be employed where the wet spinning of flax, hemp, " jute, or tow is carried on unless sufficient means be employed for protecting them from " being wetted, and where hot water is used, for preventing the escape of steam into the " room," it may be assumed that there could be no objection to extending to the females employed in these gangs a protection, similar in principle, against the bad effects of working in high wet corn. These effects are strongly commented on in the evidence. There can be no doubt that the practice inflicts much physical hardship, and is injurious to female delicacy.

VIII. AS TO REGISTER OF NAMES OF CHILDREN AND YOUNG PERSONS EMPLOYED IN A PUBLIC GANG.

61. It is essential, in order to prevent evasions of the regulations prescribed by the magistrates in granting the gangmaster's licence, that there should be a mode of ascertaining at any time that the children and young persons employed are not under the age to which they are limited by the regulations. It is proposed by one of the witnesses (b 142), that a register should be kept and the list of the children employed should be " laid before the Board of Guardians at each sitting."

62. We think that power should be given to the magistrates to require that the gangmaster should, at the time of engaging any child or young person, ascertain his or her age from the parents or guardians of such child or young person, and should enter the same in a book to be kept by him ready to be produced to the person on whose land he takes his gang to work, and to any magistrate who may demand to see the same. This would probably be sufficient to put a check upon any neglect of the regulations, and would be less onerous than the suggestion above adverted to, and far less so than the requirements of the Factory Acts in regard to the registration of the ages of children.

IX.—AS TO REQUIRING SOME AMOUNT OF SCHOOL ATTENDANCE IN THE CASE OF CHILDREN AND YOUNG PERSONS WHO ARE EMPLOYED BY A GANGMASTER IN A PUBLIC GANG.

More active steps to promote elementary education desired.

63. The number of persons of all classes throughout the evidence who have expressed their desire to see elementary education more widely extended among the young engaged in agricultural labour is a satisfactory indication of the increase of late years of convictions favourable to some more active steps to promote it than have yet been deemed possible.

The question as regards the public gangs.

64. To those who have most earnestly considered the subject in relation to the public gang system the problem appears to present itself under three aspects.

1. Where demand continuous and supply of children abundant.

65. 1. There are localities where the demand for children's labour is continuous or nearly so thoughout the year, and where children are abundant to supply the demand.

66. In such localities it is thought that the half-time system of school attendance on alternate days would be practicable and easily enforced; the days of attendance changing in alternate weeks, on account of the schools not assembling on Saturdays (a 94, 95, 220, 234, 249, 253; B 189-202).

67. The experience of Mr. Paget, late M.P. for Nottingham, as detailed in the Evidence (b 231–3), as well as that of others referred to by Mr. White (B 189–202), is very valuable upon this portion of the subject.

2. Where demand intermittent.

68. 2. There are many localities in which the demand for children's labour is intermittent, their services not being required in some cases for several weeks, in others for three, four, or more months together (a 85, 97, 103, 135, 249).

69. In such localities it would be desirable that advantage should be taken of those periods of intermission, to require that all children working in the public gangs should, previously to being engaged by the gangmaster, produce a certificate from a schoolmaster that they have attended school for a certain number of hours during the slack months, somewhat according to the principle of the Act relating to children employed in printing patterns on woven fabrics, called the Print Works Regulation Act, 1847 (10 & 11 Vict. c. 70).

70. By s. 3 of that Act it is enacted that the occupier of every print work shall, before employing any child therein, obtain from a schoolmaster a certificate according to a specified form (see copy form, Appendix, p. 150), that such child had attended school for at least *thirty* days, and not less than *one hundred and fifty hours*, during the half year immediately preceding the employment of such child; such school attendance to be after the hour of 8 in the morning and before the hour of 6 in the evening; but no

attendance of less than 2½ hours on any one day to be reckoned; nor any attendance on any one day for more than 5 hours to be reckoned for more than 5 hours.

71. The Inspectors of Factories have had occasion in their reports to point out the two principal defects in that Act: 1st, That the school attendance may, under it, be distributed very irregularly throughout the half year. 2nd, That "No child need attend "for more than 30 days in any half year, provided he attend five hours on every one of "those days, *i. e.*, for only six weeks, reckoning five school days per week;" both of which modes of attendance lead to very little progress being made; whereas, under the regulations of the Factory Act, a child must attend either for three hours on five days or five hours on three alternate days every week. (See Abstract of Factory Regulations, *infra*, s. 79.)

72. It is undoubtedly important that the school attendance should be distributed as regularly as possible throughout the periods of slack work, and that a more definite rule should be adopted than that of the Print Works Act. It might, for example, be left to the option of the magistrates granting the gangmaster's licence to require that the gangmaster should, previously to employing any child in a public gang, obtain a certificate that such child had attended school for one or other of the periods below named, within the preceding six months, viz.:—

For 20 hours (or 4 school days) per week during 12 weeks (= 240 hours).
„ 15 „ (or 3 school days) per week during 20 weeks (= 300 hours).
„ 20 „ (or 4 school days) per week during 18 weeks (= 360 hours).
„ 20 „ (or 4 school days) per week during 20 weeks (= 400 hours).

73. As it was one of the recommendations of the Education Commission (1861) that large powers for the promotion of education should be given to county boards, we venture to think that a discretionary power, such as that above pointed out, might with propriety be entrusted to the magistrates in petty session, and that it would be exercised willingly and with good effect.

3. Where demand continuous and children scarce.

74. 3. Again there are localities in which the demand for children's labour is continuous, or nearly so, throughout the year, but where children enough to supply the demand are more or less difficult to be obtained. In such cases it is urged that the moral and intellectual interests of the children demand the first consideration; and that if the law was to require a certain amount of school attendance in the course of the year, distributed as above indicated, as the condition of their being allowed to be employed in the public gangs, means would be found by the employers of such labour either to supply their place, when they are at school, by young persons or by adults, or to dispense with them altogether by resorting to improved machinery (a 191; B 182, 201.)

Common objections to requiring school attendance in the case of the children employed in public gang

75. Various objections are urged against any requirement of school attendance in the case of these children. A common objection is, that in many of the more thinly peopled districts it must often happen, under present circumstances, that there is no day school within any reasonable distance from the child's dwelling. In such cases a provision might with propriety be introduced analogous to that contained in s. 39 of the Factory Act of 1844 (7 & 8 Vict. c. 15.), by which, under certain circumstances, there defined, the inspector of factories is required to point out some school within two miles which the children might attend. It might very properly be provided that no penalty should attach to the employment of a child not having a school certificate of the kind specified, if there is no school in which, in the opinion of the magistrates, reading, writing, and arithmetic can be satisfactorily taught, within two miles of the residence of such child.

76. Another objection is, that the parents might not be able to afford to pay the cost of schooling.

77. Undoubtedly there are many cases in which it would require a very unusual amount of self-denial, if it would not be absolutely impossible, for a labourer earning a low rate of wages, and having a large family, to provide the cost of schooling for a child, previously to its being permitted to work in a public gang, under the regulations as to school attendance above indicated. In such cases if the services of the child were essential to the employer, the employer would take means to aid the parent to keep the child at school for the required number of days or weeks which would qualify it for admission to the gang.

Principle of Factory Ac in regard to education.

78. But all difficulty ought to be held to have ceased from the moment that the child has begun to earn wages. In that case the great principle which has been established by the Factory Act, and which has produced results the magnitude and the beneficence of which cannot be overestimated, comes into view, and ought unquestionably to be applied to the case now under consideration. That principle is, that in the case of children between the age of 8 years (under which age they are not permitted by the

Factory Act to be employed at all) and the age of 13, wages-earning employment should carry with it the condition that a small but definite per-centage of the child's earnings should be devoted to the high and essential object of its education.

79. The following is a brief abstract of the clauses in the Factory Act embodying this principle which it is desirable to quote in this place in order that its leading points may the more readily meet the eye of those whom it may concern in the districts under review, and may receive their mature consideration.

(*a.*) By s. 38 of the 7th Vict. c. 15 it is laid down that "the parent or person having "any direct benefit from the wages of any child under 13 years of age "employed in a factory must cause such child to attend school."

(*b.*) The school attendance must be either for three hours a day during five days of the week (s. 38), or on three alternate days for five hours each day (s. 31).

(*c.*) Non-attendance is excused: 1. For sickness or other unavoidable cause. 2. By consent in writing of Inspector of Factories (s. 38). By s. 39, the inspector cannot disallow the certificate of a bad school unless he can specify a good one within two miles.

(*d.*) By s. 39 the occupier of every factory in which a child is employed must obtain, on a day named by the inspector, a certificate in a certain form from the schoolmaster, that such child has attended school during the prescribed times, and must produce such certificate when required by the inspector.

(*e.*) By the same section provision is made for the payment to the schoolmaster of the school fee. The duty is imposed upon the occupier of the factory (the employer of the child) to pay to the schoolmaster for the education of such child any sum the inspector may require, not exceeding twopence per week. This sum the occupier (employer) may deduct from the wages payable to such child; but the sum is not allowed to exceed one-twelfth part of the child's weekly wages.

80. It would not seem to be difficult to adapt the principles of the above-named Acts (the Print Works Act, and the Factory Act) to the case of children employed by the public gangmaster, according to the option of the magistrates granting the gangmaster's licence, as indicated above in s. 72.

Schoolmasters and others would see that the law was observed.

81. When once invested with the force of law, the regulation requiring a specified amount of school attendance in the case of all children employed in the public gangs would be watched over and preserved from neglect by the schoolmaster, who would be sure of receiving his school fees from the hands of the employer, and also by the clergyman and others acting in behalf of the best interests of the labouring poor.

Parents would in many cases co-operate.

82. But there is much in the evidence that shows that the parents of the children would in many instances be glad to be aided by the requirements of a legal obligation to resist the pressure and the temptations to which they are often subject. They are liable to be urged at times by the parish officers, at times by employers, under threats of being themselves discharged, to allow their children to be taken to work at an age when it would manifestly be to their greater advantage that the school attendance should not be broken in upon, or entirely discontinued; and it is plain that many naturally well-disposed parents would welcome a regulation which would oblige them to make some further sacrifice by which the education and general well-being of their children would be forwarded (a 9, 17, 18, 31, 115, 185, 198, 199, 200, 206, 208, 317.)

Children should be protected.

83. But where it is not so, where the pressure of the demand for children's labour, or the selfishness, or the indifference, or the presumed necessities of the parents, conspire to urge the sacrifice of the child, there is no reason why the same legislative protection should not be thrown around the child employed in one of these public agricultural gangs as has been accorded, with most beneficial effects, now universally acknowledged, to the children engaged in the trades and manufactures of a great part of the kingdom, and proposed to be extended to the whole of them by the Bills now before the House of Commons.

Price of work of adult male labourers in many cases depressed by the excessive employment of women and children.

84. One argument in favour of imposing some obligation of school attendance upon children employed in these gangs, and of excluding girls from them under a certain age, or females altogether where practicable, which has been adverted to by some of the witnesses, eminently deserves attention. It is averred that under the present system, by which the labour of children and women is so largely employed, the price of many kinds of work which is ordinarily done by adult male labourers is much reduced, and such labourers are kept out of employment for several weeks, or even months, while their wives and children are doing their work (a 191, 173, 177, 202, 254).

Some large occupiers would pro-

85. Although wherever the public gang system prevails its notorious ill effects upon the morals of the young, and especially of females, together with the excessive fatigue and

other hardships often accompanying it, have called forth, as has been shown (S. 41), strong and influential opinions that it ought to be subject to regulation, it must, nevertheless, be anticipated that some, especially the larger, occupiers will be unwilling to see any restrictions placed upon a system which, under present circumstances, supplies them with cheap labour. There is indeed little doubt that, were all moral and other considerations put out of view, the public gang system is generally found by the farmer to be useful and profitable to him, by the cheapness of the rate at which he can get certain work done, by the ready means it affords of procuring extra labour at the moment it is required, and by saving to him the manual labour of one of his regular labourers, who would otherwise have to superintend his own "private gang." Some of the largest occupiers also and others maintain that, within their own experience, no physical hardships not common to all agricultural labour are inflicted upon the young or upon females who have worked for them in a public gang; that some public gangs are well conducted, and are therefore unobjectionable; and that the low state of female morals, attributed to the influence of employment in the public gangs, is equally found in other classes of females in the same districts, and is as much due to other causes as to gang labour; they therefore do not admit the need of legislative interference.

bably object to legislative interference with the public gangs.

The public gang system profitable to the large occupiers.

Some maintain that the evils connected with the public gang system are due to other causes.

86. We do not think that these views are likely to prevail against the great mass of testimony of a contrary description throughout the evidence.

Those views are outweighed by the rest of the evidence.

87. It is, we think, impossible to resist the conclusion to which almost every page of the evidence leads, that it is the imperative duty of Parliament to interpose for the protection of the young and of females employed under the system here exhibited.

88. We cannot think that the perusal of the evidence will leave room to doubt that the public gang system is one which,—whether the mode in which it is carried on be looked to, or the circumstances out of which it had its origin,—can deservedly excite any reluctance to place it under salutary regulations.

89. It is possible that any regulations of the kind which we have felt it our duty to suggest, although in accordance with the opinions of a large number of persons (as we have shown (S. 41), who have had the best opportunities of arriving at the right conclusions, may have the effect of placing some difficulties in the way of the public gangmaster in forming and organizing his gang and maintaining it at its present numbers. It is possible also that, the demand for the services of a public gang remaining the same, as it is likely for some time to do, these difficulties may raise the price of common gang labour and therefore tend to the gradual abandonment of the system of the public gangs.

Regulations may be unacceptable t gangmaster and may tend to the discontinuance of the system.

90. Should, however, the gradual abandonment of the public gang system be the result of the legislative interference proposed, the entire evidence proves that such a result would be in accordance with the best interests of the labouring agricultural population now subject to it.

Such a resu would be beneficial to the persons now subject to this system of labour.

91. The public gang system does not appear to be anywhere in these eastern counties (where alone it is found) more than 60 years old; in some localities it has not existed more than 30 years. It is the direct result, as has been described, of two causes; first, of the pulling down of cottages in what are termed "close" parishes to avoid poor rates, and thereby driving the agricultural population off the land into distant villages and towns; secondly, of the formation, by the enclosure of wild land or otherwise, of large farms, without providing an adequate number of cottages to contain the workpeople required to supply the demand of labour for the farm.

Public gang system of recent origi Its causes.

92. It is not to be believed that any landowner who, either in the past or present generation, was led to adopt that policy in regard to the distribution of agricultural labour, could have realized the amount of physical hardship, of unnecessary fatigue, imposed by it on old and young, on the strong and the weak, from day to day and year to year, at all seasons and in all weathers; still less could he have anticipated that the absence of a proper distribution of agricultural labour would have given rise to a system which has increased to so great a degree the temptations to and opportunities for moral evil, to several successive generations of the young of both sexes in the localities where it exists.

Its consequences probably not fully anticipated.

93. The alteration in the law of rating effected by the Union Chargeability Act of 1865 (28 & 29 Vict. c. 79) has happily put an end to the inducement which led in so many instances to the pulling down of cottages, and driving the rural population to a distance from the land which they cultivated. It may be expected that by degrees sufficient cottage accommodation will now be provided on each farm. The good economical, social, and moral effects arising from the fulfilment of this duty are strongly pointed out by various persons of authority and experience in the course of the evidence.

One cause removed by the Union Chargeability Act o 1865.

We venture to draw particular attention to the account given by the Earl of Leicester of "the facts as they exist" on his own estate, which his Lordship believes "is a fair "example of the majority of landed estates in the country."

Advantages of better distribution of labour upon the land.

94. At a late meeting of a Norfolk agricultural association his Lordship stated as follows (b 226):—

"Previous to the passing of the important measure of 1865, by which the area of rating was extended, it had occurred to my mind, as well as to many of my tenants, that it would be desirable to provide houses for the labourers in the parishes in which they were employed, though by so doing the probable certainty of increased rates was incurred; after the passing of that Act, I do not think the question admits of a doubt. I am the owner of 521 cottages, supplying probably about 450 able-bodied labourers. I calculate that 950 labourers are required to cultivate my property; thus leaving 500 to be obtained who are not resident upon the estate. I will divide the labourers employed into what I will call the home and foreign supply. The home supply can always be depended upon; they have constant employment, and although wages are nominally 10*s.* per week, yet owing to the system of piece work (a system as beneficial to the labourer as it is profitable to the employer), I think I may state their earnings to be 12*s.*, with a considerable increase in hay and corn harvest. They live in good houses, and I may say that, with hardly an exception, owing to the untiring energies of my late agent, Mr. Keary, and my present agent Mr. Shellabear, they live in decency and comfort; they almost all have good gardens, and for these and their houses, which are let by the week, they pay an average rent of 2*l.* 17*s.* 4*d.* per annum. These men will remain on the estate; but of what does the foreign supply consist? Those 500 men who who are required to properly cultivate the land? They have no certainty of constant employment. Under the most favourable circumstances, if living within the parish, they occupy houses that have been built upon the speculation of a remunerative return upon the outlay, and to afford this they have to pay 4*l.* or 5*l.* a year for a meagre dwelling, in which they cannot live decently or comfortably, and they rarely have a garden. But in very many cases they have also to walk three or four miles to and from their work in all weathers; they have not the same attention in sickness or ill-health as those resident on the estate, and there is not, and cannot be, any tie to bind them to it. I say it is much to the credit of those men that they are seeking happier homes and better masters; and in these days of increasing intelligence and consequently more rapid and direct communication with the rest of England, I believe that the scarcity of labour we are now experiencing is merely the commencement of what will be seriously felt in our agricultural districts, unless an immediate remedy is applied; and the only remedy is to build as speedily as possible sufficient cottages for the larger proportion, if not for all those required to cultivate the land, either upon the farm or in the parish where they are employed. I have no hesitation in saying that where there is a deficiency of cottages the supplying that deficiency is one of the best investments a landlord can make. Admitting that the rent received from the labourer would not pay a remunerative interest upon the outlay, I much question whether the existing rents of land can be maintained without further cottage accommodation, but I am satisfied that rents may be considerably increased when there is a sufficiency of homes for the labourer. During an existing lease there is not one of my tenants who is not willing to insure me 5*l.* per cent. interest upon any sum I may expend in providing homes for his labourers, where they are required, and the time is not far distant when the first requirements of a farm will be, not ample farmsteads, but sufficient cottages. Now a word as to the plans and the details of letting these cottages. It may be thought that this is solely a landlord's question, but it is not so. All that we may attempt to do upon such occasions as the present to improve the physical and moral condition of the labourer is of little avail unless he has a home suitable to the wants of himself and his family, and I have found my tenants not only eager to promote these associations, but ever ready to co-operate, with me in educating clothing, and attending to the wants of those they employ. I believe that my cottages are now constructed at the least possible cost, with the greatest amount of convenience and every accommodation required by a labourer and his family, and I much doubt whether the cottages I have built since 1863 at * * * * can in any way be surpassed. They are substantially built, of the best material, and I have not attempted in any way to make them ornamental; the doing so would not only materially increase the original cost, but add greatly to the expense of keeping them in repair. The cost has been from 100*l.* to 115*l.* per cottage, not including carriage, which is done by my tenants, and may be estimated at 12*l.* per cottage. These cottages, as well as all others on my estate, are for the use of the labourers employed upon those farms to which they are contiguous, and I consider it right that the tenant should have the nomination of the occupant, but that in every case the cottagers should hold direct under their landlord, pay their rents to him, and not be removed except by his consent. It has been said that an Englishman's house is his castle, but this must not be applied without reservation to the cottage of the labourer. I find that, whether from an eagerness to obtain assistance towards the payment of their rent, or a dislike to turn out their children when married, overcrowding will gradually and certainly ensue, with the necessary accompaniment of want of decency and comfort, unless strict rules are laid down and they are strictly enforced. As a rule, the children when married must seek another home, and no lodger should be permitted without special permission. I have now stated what I believe to be the chief cause of the evil which is beginning to affect us, and appears likely to increase. It has long been a source of misery to the labourer, and I have a firm conviction that the comfort of a convenient residence, the wages we can afford to give, home associations, and the supervision that would not be obtained in a strange land will retain for us that greatest source of our wealth, the muscle and sinew of the agricultural labourer.

[His lordship's remarks on this subjects were borne out by the gentleman who returned thanks for "their president, the Marquis of Cholmondeley," and who "could not but reiterate all "that he (the Lord Lieutenant) had said."]

95. Instances are referred to in the evidence of the same principles having been acted upon with success by other large landowners (a 30, 195, A 181). And the whole

subject, including that of the gang system in these counties, has been dealt with at length and in great detail in the Report of the Medical Officer of Health to the Privy Council in 1865, and laid before Parliament in that year (Seventh Report of the Medical Officer of the Privy Council, p. 126).

The legislative regulation of the public gangs would further contribute to the better distribution of agricultural labour.

96. If one of the results of placing the public gangs under salutary legislative regulations should be to diminish the disposition of the gangmaster to form them, and thereby to supply another motive for the proper distribution of agricultural labour in suitable cottages upon the land, it will contribute greatly to the just satisfaction and to the happiness and well-being of the labouring poor in these districts, and be no less advantageous in an economical point of view to the employer, in the saving of time and strength now thrown away in going and returning long distances to and from work. All that time and strength wasted; all the suffering from extra and unprofitable fatigue produced to the labourer and to his children; every instance in which the parent may have traced the moral ruin of his child to the undermining of delicacy by the overcrowding of cottages, or to the contaminating influences of the public gang, must have been so many incentives to feelings in the minds of the labouring poor which can be well understood, and which it would be needless to particularize. They must be conscious that much bodily and mental pain has thus been inflicted upon them from causes for which they were in no way answerable; to which, had it been in their power, they would have in no way consented; and against which they were powerless to struggle. Every measure contributing to cause proper cottage accommodation to be distributed according to the need upon or near the land to which the services of the agricultural labourer and those of his family are applied, must, as far as it reaches, have a most salutary effect in tending to allay such feelings, and be, in many other respects, a great public benefit.

Private Gangs. Children and women employed in them, much more numerous than those in the public gangs.

97. But a very small proportion of the young engaged in agricultural labour in the counties to which this Report refers, will be reached by any measure which applies to the public gangs only. Our returns and evidence give a number of between 6,000 and 7,000 children, young persons, and women employed in the public gangs at the time of our inquiry. The total was probably somewhat in excess of that number. To these our attention, according to our instructions, has been primarily, and almost exclusively directed. But our Assistant Commissioners, in the course of their inquiries, could not fail to observe, and could not decline to hear, much relating also to the private gangs in the occasional employ of individual farmers.

98. The aggregate number of children, young persons, and women occasionally employed in the private gangs throughout these counties, is greatly in excess of those employed in the public gangs. Where the numbers of the latter "are," to use a common mode of designating them, "counted by hundreds, those in the former are counted by thousands." It seems to be a generally and necessarily prevailing practice, wherever the farms are large in these counties, for the occupier to employ at certain seasons either a public or a private gang. How large must be the numbers employed in the latter manner may therefore be inferred, when the prevalence of large farms throughout these counties is borne in mind.

Effects of employment in the private gangs as bad as in the public gangs.

99. Such evidence as our Assistant Commissioners have recorded concerning these private gangs, tends to show that in their moral effects upon the young they are very little distinguishable from the public gangs. They are superintended by one of the farmer's own men. There is much testimony to the fact that the treatment of the young in the private gangs is occasionally not so good as in the public gangs (a 113, 192, 195, 196, 205). It appears to be frequently quite as bad (a 177, 192, 195, 276). Where the sexes are mixed, as is almost always the case, the results are quite as demoralizing as in the common gangs (A 17; a 122, 130, 226, 228, 275–7). It appears that the casual superintendent of a private gang is often a man less capable of exercising control than a regular gangmaster, and is sometimes a man of bad character. There is no security that he should have any of the qualities required to maintain order and decency among those assembled under him. Some employers have endeavoured to separate the sexes in the private gangs, and to limit the age at which they would admit children to work in them; but these efforts were for the most part unsuccessful, for want of the requisite support, or the means of enforcing their regulations. The evidence shows that there is no practical difference between the ages and hours of work, the modes of work, the composition of the gang, the state of education, and the moral condition, in the case of those employed in the private and the public gangs (a 6, 14, 31, 38, 122; A 8, 24; B 11).

No practical difference as regards the results between the private and public gangs.

AGRICULTURAL GANGS.

Large numbers of children of tender age employed in other branches of agricultural labour.

100. Our Assistant Commissioners have also incidentally called attention to the large number of children in the same districts, who, although not employed either in public or in private gangs, are taken at the earliest possible age (between six and seven years of age and upwards) to work in some department or other of agricultural labour; from which period their opportunities of school attendance almost entirely cease. They specify in particular the very large number of children of very tender years sent into the fields to "keep crows" or drive small birds from the crops, to look after cattle, or to perform other services not requiring much bodily strength.

These latter as well as those employed in private gangs, seem to require legislative protection as much as those in the public gangs.

101. It would appear that these latter children, as well as those employed in the private gangs equally demand the attention of the State, and are in as much need as those employed in the public gangs of some legislative measure for their protection from an unreasonable amount of work, and for their education.

This question was touched upon by Report of 1843 to the Poor Law Commissioners, "On the employment of women and children in agriculture."

102. This question was touched upon in a Report "On the Employment of Women and Children in Agriculture," addressed to the Poor Law Commissioners, and laid before Parliament in 1843.

But that inquiry led to no result.

103. But the inquiry upon which that report was founded, under the instructions of the Secretary of State was, in accordance with s. 2 of the Act of 5 & 6 Vict. c. 57. confined to the short period of 30 days. It necessarily therefore embraced only a portion of the subject, the brief inquiries being confined to the counties of Norfolk, Suffolk, Yorkshire, Northumberland, Wilts, Lincolnshire, Dorset, Devon, Somerset, Kent, Surrey, and Sussex, and led to no result.

The private gangs and other modes of employment of children and women are beyond the scope of our instructions.

104. The evidence recorded by our Assistant Commissioners, on the private gangs and on the other branches of agricultural employment for children, was necessarily very limited, as being only received incidentally to the main object of their inquiry. Upon that evidence and upon the wider branches of the subject which it opens up, we are not called upon to express an opinion, as being beyond the scope of our instructions.

All this we humbly certify to Your Majesty.

(Signed) HUGH SEYMOUR TREMENHEERE.
EDWARD CARLETON TUFNELL.

2, Victoria Street, Westminster,
March 5th, 1867.

APPENDIX TO SIXTH REPORT.

REPORTS AND EVIDENCE

OF

ASSISTANT COMMISSIONERS.

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REPORT on AGRICULTURAL GANGS.
By Mr. F. D. LONGE.

To Her Majesty's Commissioners.

Agricultural Gangs.

Mr.F.D.Longe

A.
General observations.

Gentlemen,

I beg to submit to you the evidence which I have collected concerning the employment in agricultural labour of children and young persons under the system known as the gang system in the counties of Lincolnshire, Northamptonshire, Huntingdonshire, and Cambridgeshire. During the autumn of last year and the spring and early summer of the present year I made inquiries as to the extent to which any such system prevailed in these counties; I visited those parishes where it was principally carried on and obtained evidence from clergymen, farmers, parents and others as to the nature of such employment and its effects on the persons engaged in it.

2. The evidence which I have obtained shows that women and children are employed in field work in gangs and otherwise to a much greater extent in some districts than in others, and tends to explain the causes to which the development of the gang system in particular districts is to be attributed.

3. The agricultural economy of one farm or district differs from that of another according to the character of the soil and the kind of crops congenial to it; and for reasons of this kind the labour of women and children is far more useful in one district than in another. On the other hand, there are many light agricultural operations common to all districts which can be done, perhaps, equally well either by men or by women and children, and it is evident that the difference in the extent to which women and children are employed in such operations in different districts is to be attributed to custom, social condition, or local circumstances affecting the habits of the people, and not to any difference in the requirements of the farmer. Field work is evidently more the fashion, so to speak, with the women of some parishes than of others, when the agricultural conditions are the same. In some parishes women and girls are commonly employed at such work as hoeing; in other parishes they never undertake it. In some parishes it is the custom for the women and elder girls to go out to work rather than the younger children. In other parishes the younger children are sent out under the ganger, while the women stay at home.

4. Women and children of both sexes from 8 years upwards are employed more or less in gangs or otherwise in all parts of these counties, and although the difference as to the numbers of such persons employed together and the number of months in the year during which they are employed in different parishes is so great that in some parishes gang work or field work seems to be the main occupation of all the women and children of the peasant class, while in other parishes the employment of such persons is only exceptional, the difference is one of degree rather than of kind.

5. The particular matters of inquiry to which the evidence relates are partly those which form the subject of the 13 questions which we circulated under your directions, and partly matters bearing on the subject upon which information could be better obtained by personal interviews with farmers, gang-

masters, parents, and other persons practically acquainted with the employment of children in the different districts which I visited.

A.

Employment for gangs during the year.

6. The following sketch will show the principal kinds of field work at which children and women are employed in gangs or otherwise in these counties during the several months of the year:—

January.—In this month children and women are employed in sorting potatoes in the Isle of Axholme, and in the fen districts of Lincolnshire and Cambridgeshire. During mild weather children are employed in gangs picking stones in many parishes. In all districts the number of women and children employed in this month is very small.

February.—Very little work done, except as in January.

March.—Towards the end of this month children and women begin to be employed in gangs and separately, (1.) In picking "twitch" (the roots of the couch grass); (2.) In spreading manure; (3.) In hoeing; (4) In setting potatoes.

April.—The number of children employed in the four kinds of work last mentioned is increased. Towards the end of this month weeding in the growing crops begins, and the gangs are considerably increased.

May and June.—The greatest number of children are employed in gangs during these months at weeding, picking twitch in the fallows, &c. In districts where the common gang system does not prevail a great many children are employed in small farm gangs at the same kinds of work.

July.—The employment of children in all districts at the above kinds of work is very much diminished during this month; gangs are still employed at weeding and singling turnips. In some districts a great many children and women are employed in getting up hay.

August and September.—During these months although few gangs are at work; the aggregate number of children and women employed in the fields in all districts is greater than in any other month. All who not employed in harvest work, making bands in the wheat field, pulling flax, gathering woad, or in some other work are engaged gleaning.

October.—In districts where potatoes are grown in large quantities children and women are in the greatest demand in this month. They are also employed in gathering mangold wurtzel. Twitch picking and spreading manure still goes on.

November.—Gathering potatoes, mangold wurtzel, turnips, and carrots still occupies a great number of children in many districts. Gangs are still employed at twitch picking. Stone picking begins in the highland districts; but in most parishes the employment of children is reduced to a minimum towards the end of this month.

December.—In the gang districts children and women continue to be employed at the same work as in November until stopped by the frost.

Besides the above-mentioned employments there are a variety of others at which both children and women are employed, either separately or as assistants to men. Very young boys, and in some parishes girls are employed at tending cattle, keeping birds off the newly sown crops, helping at the thrashing machines, feeding cattle and sheep, &c.

Meaning of the term gang system.

7. The term gang system, although it is generally understood to designate the employment of children in field work by a person not himself the occupier of the land on which they work, is by many persons also applied to the employment by the farmer of a number of children and women in sets under the superintendence either of one of his own labourers or of an old or disabled man as their "guide" or "ganger," and although the two systems are generally recognized as distinct and even opposed to each other, it is clear that the evils of the former or common gang system also attend the latter or private gang system, though undoubtedly in a less degree. Both systems are distinguished from the employment of children and young persons as assistants only to their parents or relatives; both systems are more or less attended with injury to the moral character of the workers from the mixture of sexes without proper control over their conduct and conversation; and both systems tend to bring into field work a greater number of young children than would otherwise be employed, and thus to prevent the education of both boys and girls in the schools which have been provided for them, and to disqualify the latter for the more beneficial and appropriate occupation of household service.

Private gangs.

8. The private gang system is principally confined to farms of 300 acres and upwards, which afford such an amount of work for this class of hands that the farmer is able to keep 10 or more children and a man acting as their superintendent in regular employment during some months. Gangs of this kind are very generally employed at certain periods of the year on the larger farms in these counties; in some parishes the system prevails to no greater extent than that for a few weeks in the summer some 10 or 20 boys or children of 8 to 14 years of age are employed at weeding or picking twitch. In other parishes farmers are in the habit of employing in this way from 20 to 30 persons, including young children of 8 years of age as well as girls of 18 years of age and upwards, at different kinds of work during the chief part of the year. It seems that this system has a tendency to increase as large occupations become more common, and as a scarcity of agricultural labourers renders women and children more wanted.

Common or public gangs.

9. The distinctive feature of the common gang system is that the gangmaster and not the farmer is the employer and master of the workers. The supposed advantage to the farmer of this system is, that while the gangmaster relieves him entirely of the trouble and responsibility of getting and managing the children, he gets his work done at a smaller cost than he would, either by employing men, or even by employing the same class of hands under one of his own labourers.

10. In towns or villages where the gang system prevails in its most fully developed form the majority of the labourers' children between the ages of 8 and 15, together with a considerable number of young women above this age, are permanently attached to particular gangmasters, by or through whom alone they are employed. The gangmasters are recognized by the farmers as the masters and employers of the children, whether they employ them with their gangs, or whether they hire a few children of them to work with their own labourers. In some places a farmer cannot get even a boy of 12 or 13 to do a week's work, except by hiring him of the gangmaster. When a gangmaster lets his children to a farmer he charges the farmer a certain sum per head, varying

from 4*d.* to 1*s.* per day as the children's wages, with an additional halfpenny per head for himself.* In some places the gangmaster charges the farmer 8*d.* or 10*d.* per head, large and small, or a certain sum (about 14*s.*) per score, and makes his own profit by getting the children for less than he charges the farmer. When the gangmaster accompanies his gang he generally takes from 15 to 20 hands, sometimes as many as 40. If paid day wages he receives 2*s.*, 2*s.* 6*d.*, or 3*s.* a day, being always about 6*d.* to 9*d.* above the wages of the ordinary day labourer. The children's wages are paid to him, as in the case where they are hired of him by the farmer.

System of letting work to the gangmaster.

11. The principal source of gain, however, and which seems to be essential to rendering the common gangmaster's trade a profitable one, is the system of taking work from the farmer by the "piece," "job," or "great," as it is called at different places. A great deal of the work upon which gangs are employed is of such a nature that the amount of labour required to perform it can be estimated with sufficient accuracy to render it fit matter for a bargain between the farmer and the gangmaster. Such bargains, as a rule, are considerably in the farmer's favour as compared with what the cost of the work would be at day wages; while the gangmaster makes his profit partly by pressing his gang to the utmost of their strength, and partly by a hasty and imperfect performance of the work. This seems to be everywhere regarded as the most odious feature of the gang system; its direct object being to get the utmost amount of work from the children without any additional remuneration being paid to them.

Economic advantages of the gang system.

12. The common gang system is evidently based on considerable economical advantages both to the farmers and parents. It tends to secure regular and permanent employment for the children during several months in the year, while at the same time it affords a convenient means by which each farmer can get the children he wants for a few days' work without being compelled to keep them one day longer than he absolutely requires. This advantage of securing permanent employment for the children is at once the basis and the evil of the gang system. Occasional employment for a few days is universally admitted to be a pecuniary loss rather than a gain to the parents, and would be no inducement to parents, however poor, to keep their children from school.

13. The following extract from the evidence of a farmer in Huntingdonshire shows the principle on which the system is based. "The system was commenced by an old man who had learnt at Chatteris "that he could get 10*s.* a week as ganger, and besides that make about two or three shillings more out "of the children. He went round to farmers, principally the smaller men, and engaged to do their "weeding for them. The gangers generally have their work laid for them about a week or 10 days "forward. The ganger generally agrees with a farmer to weed his wheat or other crops once or twice, "as it may be, before the middle of June."—(Evid. 221.)†

Evils peculiar to the common or public gang system.

14. The common or public gang system has undoubtedly some bad elements and inherent tendencies from which the private gang system is free. The subjection of the gangworkers to one of their own class, however respectable he may be, as their only master and employer, places them in an anomalous position as labourers, deprives them entirely of those motives for good conduct or respectable behaviour which naturally accompany the relations between the employer and the employed, and encourages a feeling of independence as regards the upper classes of society which shows itself in that rude and disorderly behaviour which characterises the gangworkers in almost every parish where this system prevails.

It would appear, moreover, to be the tendency of the common gang system to bring even younger children into field work than the private gang system. Wherever the two systems are found working together the younger children are always in the common gang. The faculty of making little children work is the peculiar art of the gangmaster, and the common objection of farmers to employing children themselves is the difficulty of getting any work out of them without a regular gangmaster.

The prominent evils of the system.

15. The evidence and opinions which I have gathered in those districts where women and children are employed to the greatest extent in common or private gangs point to the following as the more prominent evils of the system:—

(1.) The herding together a number of children and young persons of both sexes under the management of a class of persons whose influence, except in a few instances, is very pernicious to their moral principles and conduct.

(2.) The interference to education caused by the employment of young children during several months of the year.

(3.) The subjection of young children to an excessive amount of labour and other hardships.

Influence of local circumstances on the character of the gang.

16. The evidence shows that these evils attend the common gang system to a greater extent than the private gang system, but it also shows that the peculiarly obnoxious character which the former system bears in some districts is rather to be attributed to certain circumstances and social conditions peculiar to these districts than to the system itself. It is only in large villages or towns that the gangmaster can collect a sufficient number of workers to render such employment profitable as a permanent occupation.

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* The following is a copy of an account sent in to a farmer at Chatteris in Cambridgeshire by a gangmaster for the hire of some children:—

For	Hands.		£	s.	d.
Saturday	1		0	0	9
Monday	1		0	0	9
Tuesday	1		0	0	9
Wednesday	2		0	1	8
Thursday	17		0	15	5
Friday	1		0	0	9
		Self	0	1	0
			£1	1	1

† The gangmaster's remuneration here mentioned is the lowest earned in any of the districts I visited. The gangmaster is here supposed to receive only the ordinary wage, which in this part of Huntingdonshire is only 10*s.* per week. In some parts of Lincolnshire the gangmaster's wages are 3*s.* a day, or 18*s.* a week. The difference in the rate of wages earned by labourers in different localities in these counties only a few miles apart is very remarkable.

It is in districts where the labouring population is improperly distributed, being congregated in a few large "open" villages or towns, instead of being housed upon or near the land on which they work, that the services of the common gangmaster are most needed by the farmer. It is this condition of the districts where the system principally prevails which occasions its two greatest evils, viz., the congregation of large numbers, and the long journeys to and from work. The corrupt morality and obscene language of the gangworkers, although perhaps much encouraged by the system, is correctly attributed in part to the want of decent sleeping room and the teaching of bad parents in their homes. The children of whom the common gangs in every district are principally composed are the children of the poorest or the least respectable of the population.

Mixture of young persons of both sexes in field work the principal evil of the system.

17. Where the gangs, whether common or private farm gangs, are confined to children of one sex, or even of children of both sexes under the age of 12 or 13, and the superintendent is a respectable man, who studies to maintain proper conduct on the part of the children under his care, as is undoubtedly sometimes the case in common and often in private gangs, the evil of the system would seem to be confined to the loss of education incurred by the children while they are thus employed; and it certainly appears from the different way in which the system is regarded in different districts that its principal evil, as recognized in what may be called the gang districts, is not so much the interference with education as the extinction of modesty and morality which attends the employment in mixed gangs of girls and boys above this age.

As to state of education of gangworkers.

18. I found that it was impracticable to obtain trustworthy evidence as to the general state of education among the children and young persons employed in gang work by personal examination. With regard to children above the age of 11 or 12, although some might have had no education at all, others, and by far the larger number would have been in the habit of attending school more or less during all their earlier years, and several, both boys and girls, would have been regular school attendants up to 9 or 10 years of age. The records of school attendance kept in all schools and the statements of the clergy and other persons concerned in education furnish direct and almost complete evidence as to the loss of school time caused by the employment of children under this age in agricultural labour.

As the gang system is the best means by which the labour of children can be made useful to the farmer, the interference with education must always be regarded as one of its essential evils. At the same time, not even the gang system can secure continuous employment for little children (generally speaking) through more than six months in the year, and thus the conflict between the school and agricultural employment is very different to that between the school and the employment of children in trades and manufactures, where the child when once taken into employment loses for ever the opportunity of attending a day school. The evidence, which shows the ages at which children are employed in gangs, and the number of weeks or months during which they are so employed, must necessarily show the extent to which the education of the children is interfered with by such employment. An examination of children found in field work would no more show the effects of the gang system than of other causes to which a difference in the state of education in different parishes is to be attributed.

Character of gangmasters.

19. The evidence shows that the men acting as common gangmasters are, as a rule, unfit for such an office. They generally belong to the class called "catchwork labourers," and in most cases are men of indolent and drinking habits, in some cases men of notorious depravity. Some of the gangmasters with whom I myself conversed were respectable and kind men, but such cases are evidently exceptional. (*See* Evid. 14, 113, 184.) The persons employed by farmers to superintend the gangs employed by them were in many cases men selected on account of their fitness for the work in respect of both character and disposition. On some farms the foreman himself was always employed as the ganger; in most cases an elderly labourer of good character. It was evident, however, that age or unfitness for any more active employment is generally the principle qualification, and the character of the man a matter of secondary consideration.

Treatment of gangworkers.

20. It appears that under both systems the children are for the most part treated with kindness. They are too valuable to both farmers and gangmasters, and their parents are too jealous of their being corrected by anyone but themselves, to admit of their being ill treated as a rule. Cases of hard and even cruel treatment do however occur occasionally in farm gangs as well as in the common gangs. Bad-tempered men are sometimes allowed to continue as gangers, and oaths and brutal threats are too commonly used as a means of urging on the less active or able of the workers. It is probably true, as stated by some of the gangmasters, that the children are less likely to be ill treated by the common gangmasters than by the gangers put over them by farmers. The facility with which the former can get the children they want from time to time does, to a great extent, depend on their reputation for kindness; whereas the treatment the children receive from the farm labourer depends very much upon the disposition of the farmer himself. Under both systems the gangworkers suffer far more from the want of proper control than from the severity of their masters.

Effect of gang-work on the physical condition of the children.

21. Injury to the health or constitution of children by wet, cold, or overwork, is an evil which may attend the employment of children in field work under any system. It appears, however, that such effects, even in the gang districts, are only exceptional, and that the employment of children in field work, whether in the gangs or otherwise, is generally speaking beneficial to their health. On the other hand, girls often suffer from wet and cold when weeding in high corn or gathering turnips or mangolds in October and November. Children of 8, 9, and 10 years of age are frequently employed for weeks together at five and six miles from their homes, and are thus subjected to an amount of labour which must be injurious to their constitutions. For these abuses the parents would seem to be principally responsible. It is too often the practice for parents to make the employment of their younger children the condition on which the gangmaster may have the elder ones.

Hours of work.

22. There is a considerable difference as to the customary hours of work for children in different districts. The number of hours which constitute a day's work for children in most districts is 11, including an hour for dinner, and a quarter or half an hour at 10 o'clock. They generally commence work at 7, and leave the field at 6 in summer, and at 5 o'clock in winter. In some parishes the children begin at 8 a.m. with the women. In some parishes the boys begin an hour before the girls. In some parishes the children work the same time as the men, viz., from 6 a.m. to 6 p.m. When, as is often the

case in the gang districts, the gangworkers have to walk five or six miles to the scene of their labours, their journeys to and fro must be considered to add from four to five hours to their day's work; this, however, is generally reduced in such cases by an hour or more being deducted from the time spent in the fields. (*See* Evid. 247.)

A.
Wages of ga
workers.

23. The wages of the children and young women employed in gang work vary considerably in different districts. The general rule seems to be that the wages of women and children should be about one half and one quarter respectively of the ordinary labourer's wage. Such a proportion however would only represent the wages earned by children of 7 to 10 years of age; women's wages seldom exceed 1*s.* a day, and children's wages are seldom less than 6*d.* a day. In districts where such labour is generally in great demand women get 1*s.* 3*d.*, and children get from 7*d.* to 1*s.* per day. (Evid. 85.) Children often get even higher wages than this in the common gangs. Strong girls get 1*s.* 6*d.* a day at hoeing in the fen district. (Evid. 241.) At Louth a girl of 13 years of age earned 9*d.* a day in the employment of a farmer. She was offered 1*s.* a day by a gangmaster. (Evid. 9.) In the Isle of Axholme a child of 10 can get as much as 1*s.* 6*d.* a day picking potatoes. To earn this she would have to do a woman's stint. (Evid. 96.)

Under the gang system the payment of children according to their age and abilities, as well as the amount of work given them to do, is studied to a great nicety. This is seldom the case when children are employed by the farmers themselves. One witness, a farmer on the Heath, near Lincoln, says, "The children are the cheapest; we can get them at 6*d.* or 9*d.*; the women want 10*d.* or 1*s.* "The children work two or three hours longer than the women. The women never begin till 8; the "children work from 6 to 6." (Evid. 130.)

In districts where the men's wages are low the wages of women and children are generally low in proportion. In some parts of Huntingdonshire and Cambridgeshire men's wages were only 10*s.* and 11*s.* a week, while 13*s.* 6*d.* were the ordinary wages in the north of Lincolnshire. The ordinary wages of women in the north of Huntingdonshire are 10*d.* a day. (Evid. 232.) Boys of 8 get 4*d.* or 5*d.* a day. (Evid. 223, 224.) 8*d.* or 9*d.* a day is the highest wage generally paid to any person employed in the gangs in these counties. (Evid. 226, 258, &c.) In a part of Cambridgeshire where women and children are but little employed in field work it seems that the ordinary day wage for a women is 8*d.*, which may partially account for "Their considering it the best economy to stay at home and look after their houses." (Evid. 316.)

With these general observations I will proceed to notice shortly the result of the evidence which I have obtained as to the extent to which the gang system prevails in these counties, the number and ages of the persons employed under it, and the character it bears in different districts.

24. In the district of Lincolnshire known as the Wolds large gangs of young women and children, called travelling or tramping gangs, have been employed very generally for the last 40 years. (Evid. 1–31.)

The Wolds
Lincolnshir

This district is cultivated by large farms varying from 400 to 1,000 acres. It comprises a number of small parishes, the house accommodation of which, with the exception of Binbrooke and Ludford, consists almost entirely of a few cottages attached to particular farms. A great portion of this district has only been brought into cultivation during the present century. The supply of labour was for a long time confined to farm servants living in the farmers' houses. The process of building cottages has proceeded very slowly. In some some cases even landlords have pulled down existing cottages to protect their land from the burden of poor rates. (Evid. 30A.) The whole population of the district, exclusive of the towns of Caistor and Louth and the village of Binbrooke, is at the present time about 4,700. This population is distributed over 25 parishes, including 47,000 acres, and thus giving a proportional population of one person to 10 acres, the general population of an agricultural parish being about one person to four acres. I was informed that the cottage accommodation of the district at the present time is about one cottage to every 100 acres. (Evid. 1.) Some parishes are almost, if not entirely, destitute of cottages. "There are some large parishes with no labourers' cottages in them, so "that the women and children employed there have to go many miles to work." (Evid. 3.) In the return sent to the Commission from the parish of Withcall the acreage is stated to be 2,500 and the population about 120. (Evid. 31.) The labourers residing in these farm cottages are called "confined" labourers. They are hired for the most part by the year, and receive somewhat higher wages than are earned by labourers in other parts of the county. Their wages, including the rent of their cottages, which are free, amount to about 40*l.* per annum. (Evid. 1, 15.) The families of these labourers, being both scarce and well to do, do not afford all the light labour required by the farmers in the district. In the parish of Thoresby, where a gang from Caistor is employed during the principal portion of the year the girls do not work at all, but are kept in school till they go to service. (Evid. 17.) The children in the parish of Croxby, about four miles from Caistor, "never went out to work." It is a complaint of some of the farmers of this district that their labourers' wives will not go into the fields. This condition of things is put forward as the reason for the employment by almost all the large farmers of this district of the "travelling" gangs from Caistor, Binbrooke, Ludford, and Louth.

Caistor.

25. Gangs from Caistor have been employed in the neighbouring Wold parishes for more than 20 years. There are now two gangmasters in Caistor; they take their gangs to a distance of four, five, and seven miles. (Evid. 14, 18.) Sometimes as many as 30 persons are employed in each of these gangs, sometimes no more than 10 or 20. (Evid. 14). They comprise children of both sexes of about 8 years of age and upwards, and young women of 17 to 20 years of age. (Evid. 18).

Binbrooke.

26. The village of Binbrooke is situated in the centre of the Wold district; its population is 1,335. At the time of my visit there were six or seven men who plied the trade of gangmaster in this parish. (Evid. 23.) The total number of persons issuing in gangs from this village during the month of November 1865 was 203; this number comprised 39 boys and 42 girls between the ages of 7 and 13, 34 girls and 3 boys between the ages of 13 and 18, and 85 females and 10 males over 18 years of age. (Evid. 19). This number would be increased during the summer months.

Louth.

27. The town of Louth at the south-east corner of the Wold district has for more than 20 years been a source from which a large number of young women and children have been obtained for gang work by the Wold farmers. There are now three or four regular gangmasters in Louth. They sometimes take

out as many as 40 in a gang. (Evid. 5). There is a considerable population of Irish in Louth, of whom the gangs are principally composed. Owing, probably, to the long distances at which these gangs are generally employed, children are not taken into them at so young an age as in other gang districts. Few children are employed in these gangs under 12 or 13 years of age. The majority of the gang workers are young Irish women and English girls who have lost their characters. The number of persons leaving Louth in gangs in the weeding season would probably be about 120.

In the parish of Withcall, about five miles distant, three gangs from Louth, containing about 36 persons, are usually employed during the spring and summer. (Evid. 31.) The number of persons employed in gangs from Louth is less than it formerly was, the cultivation which the land has undergone during late years having reduced the amount of weeding required to be done. One witness, who used to take out gangs from Louth, says, "When I worked at Withcall there were scores of other men besides me, " each with 6 to 12 women and children pulling ketlucks." (Evid. 8.)

Work done by these gangs.

28. The largest number of persons are employed in these gangs during the spring and summer, at weeding in the growing crops, picking up twitch on the fallows, pulling up thistles, charlock, dock, and other weeds, singling turnips, &c.; a large portion of them, however, continue to work through the autumn, gathering mangold wurtzel and other root crops and picking up stones for the roads. (Evidence, 5, 6, 21, 23.)

29. These gangs work in different parishes within a radius of five or six miles from their homes, and they sometimes go to a distance of nine miles. (Evid. 1.) The Louth gangs are regularly employed at Ruckland, Stennigate, Donnington, and Withcall on land between five and seven miles distant from Louth. (Evid. 5, 11.)

30. The usual hours of work in the field are from 8 a.m. to 6 p.m. in summer, and 5 p.m. in the autumn. They always have an hour for dinner at noon, and often a quarter of an hour at 10 a.m. When working at five or six miles distant from home they would start at about 6.30 a.m., and leave the field somewhat earlier, so as to reach home about 7 p.m. (Evid. 5, 10, 19, 24a.) The time of returning is sometimes much later, particularly when the gangmaster has taken the work by the piece. Children sometimes do not reach home till 10 and 11 o'clock at night. (Evid. 7).

31. It is occasionally the practice for these gangs to stay overnight at the farms where they are working. According to one witness (Evid. 6) this is a common practice when they go long distances. They sleep in a barn or stable. Sometimes they stay on a farm, sleeping in this way, for weeks together, some of the party going home from time to time to fetch victuals for the rest. A day or two previous to my visit in November a gang had stopped a night at a farm in Ruckland. The gangmaster with his gang were locked up in a granary by the foreman of the farm, and let out the following morning. (Evid. 11.)

Evils of gang system.

32. The evils of gang work and the debasing influence it exercises on the character and habits of the labouring population of Binbrooke are very fully exposed in the statement of the Rev. J. T. Huntley. (*See* Evid. 19.) To the same effect are the observations of the Rev. Warren B. Hastings, the rector of the neighbouring parish of Ludford. This parish is frequently visited by the Binbrooke gangs, and supplies some of the hands employed in them when working near. Mr. Hastings says, "On asking the " best and most respectable mothers what they thought of the mixed system no language could express " their detestation. One person told me, *e.g.*, of an old man indecently assaulting, even before others, " a young girl between 15 and 16, and all testified to the foul language habitually used and applauded." (Evid. 24.) Mr. R. Greenwood, a large farmer in this parish, says, "I never employ a common gang. " I have been asked for work by one of the men from Binbrooke and from Ludford. The common " gang is very bad indeed. I think the gang system is full of evil. There are great girls and boys of " 14 to 15 years among them, and there is always something wrong going on. It does not matter who " the ganger is, when there is a lot together he has no control over them at all. I have counted 20 to " 25 in the gangs that come from Binbrooke. The only advantage to the farmer from the regular gang " system is that it saves him the trouble of seeking the children. It is a bad thing for girls to go to " work in this way. Half the girls from Ludford have been ruined by going out. The conversation " that goes on in gangs is dreadful, and the ganger only laughs at it." (Evid. 28.)

The following statement of a witness who had been for many years a gangmaster in Caistor affords trustworthy evidence of the pernicious influence of the travelling gangs on the characters of the children employed in them:—"I can speak the truth about gang work. If I had a bairn I would rather " let it go on bread and water than work in a gang. There is always such low discourse going on " among them." (Evid. 14.)

Private or farm gangs.

33. Besides the persons employed in these common or travelling gangs women and children are employed on most of the farms in this district during the spring and summer in small gangs under a farm labourer. (Evid. 18, 24a.) In many cases these gangs are confined to children of one sex. (Evid. 10, 27, 28), and a respectable elderly man selected as superintendent. (Evid. 9, 28.) They are for the most part the children of the labourers belonging to the farms on which they work, and as they are never in large numbers, nor taken very far from their homes, their employment is free from much of the evil attending the travelling gangs.

Parishes to the north of Lincoln.

34. Evidence 32 to 84 shows the extent to which children are employed in gangs in a number of parishes lying to the north of Lincoln. These parishes represent an agricultural district consisting of arable and pasture land in occupations of moderate size, with a sufficient labouring population distributed among a number of small villages within a few miles of each other. The want of houses for labourers in some parishes even in this part of the county is severely felt. Mr. Marshall, a large farmer, at Riseholme, says, "Even about here labourers have to go two or three miles sometimes. Some of " mine come from Nettleham, two or three miles off. Some of the labourers employed in Burton and " Carlton have to come four or five miles." (Evid. 32; *see also* 72.)

Private or farm gangs.

35. I did not hear of any common gangs being in existence in any part of this district. The quantity of weeding required is much less than in the fen land, and neither potatoes nor other roots are grown to any very great extent. The employment, however, of children by the farmers themselves in small gangs or sets, or under a person employed by them as superintendent, is very general during the spring and summer season. At Willingham Cherry, a small parish near Lincoln, a gang of 14 children had been at work through the summer, and were still working in November, the time of my visit. (Evid.

34.) For some years a gang of from 14 to 20 children of from 7 to 15 years of age have been in the habit of working in this parish under the parish clerk. A retired farmer living in the parish thus accounts for the existence of this gang, "There is no day school in our parish. They run about here "like little heathens, as you might say. There is a Sunday school. They go to Sunday school. "There are several girls of 12 to 15 years of age staying at home in the parish and doing nothing. "It is their parents fault." (Evid. 34.)

Agricultural Gangs.

Mr.F.D.Longe.

A.

36. I did not attempt to obtain statistical information as to the number of children thus employed, or the number of weeks they were employed in the year; the evidence which I obtained in this and in other districts as to the employment of children in farm or private gangs showed that such employment was too irregular and intermittent to admit of any accurate statistics being given about it. It appears, however, that in about half the parishes to which this evidence relates, children of both sexes are thus employed for weeding corn, picking up twitch, singling turnips, and gathering potatoes, stones, &c. Some of the witnesses speak very positively to the non-existence of such a practice in their own parishes. In some parishes women are employed more than in others. (Evid. 54, &c.) In some parishes boys only are thus employed by the large farmers. In those parishes where the soil is clayey children are very little used. In such soils the "twitch" is not picked up, and thus one of the principal employments for children is wanting. It appears from the evidence given as to these parishes, as from that which I obtained elsewhere, that the extent to which children are employed in any parish in field work depends very much upon the extent to which the means of education are supplied or school attendance encouraged.

Isle of Axeholme and neighbouring parishes.

37. Evidence 85 to 98 shows the mode and extent to which children are employed in the peculiar agricultural district which adjoins the river Trent, in the north-west corner of the county. The land of which the Isle of Axholme, and the other parishes on the borders of the Trent principally consists in a very rich soil, artificially made by allowing the alluvium of the river to be spread over the surface by the process of "warping." The crops grown on this soil are almost entirely confined to potatoes, wheat, beans, and flax, all which crops afford a great deal of employment for light hands. It is cultivated principally by a number of small freehold farmers or "cottagers," and women and children are employed upon it to a greater extent than perhaps any other district in the county. No common gangs exist in this district, but children are employed in gangs under farm labourers on most of the larger occupations for weeding in the summer, and large numbers of persons of all ages and sexes are employed together during several months of the year at setting, weeding, gathering, and sorting potatoes. In October and November, when the potatoes are gathered, almost the entire population is in the fields.

Effects on education.

38. The effect of this system on education is the same as that of the gang system in the worst districts. From May to November most of the schools are emptied of all children of about 7 years of age and upwards.

Effect on character of girls.

39. The injurious influence of field work on the character of girls is recognized here as in the gang " districts. It is a bad thing for the girls to work in the fields. They go out to work in droves at this " time of the year, along the lanes I mean. They don't work in what you call gangs. The married women all go with them. There would be whole families at work together. I have known as many as " 40 together potato picking on large farms." (Evid. 92.) " I dont think there is any question about " the evil of sending girls into the fields; they are sure to hear bad language. It is horrible, the talk " that goes on. Field work, too, spoils them for house work. They can't take to it." (Evid. 86.)

Parishes sout of Lincoln.

40. Evidence 99 to 134 relates to the district which lies between the city of Lincoln and the town of Sleaford. A great portion of this district consists of what is called the Heath, a tract of land which has now for some years been under cultivation, for the most part in large occupations, but which has not as yet been supplied with cottages for the labourers employed upon it. These labourers come from several large villages on its eastern and western borders. In many cases they have to walk four and five miles to their daily work. In a district thus conditioned the gang system might be expected to prevail, and I found that men had been in the habit of taking out common or travelling gangs from Metheringham and Dunston for work on the heath for many years. (Evid. 113.) It appears, however, that the number of children employed in these gangs has never been more than 50 or 60, and as few children work in them beyond 13 or 14 years of age the evils of the system are not so prominent here as in other parts. Children of 7 years of age and upwards are very generally employed in private gangs throughout this part of the county during the months of April, May, and June. (Evid. 130, 132, 133, 134.)

Effect on character of girls.

41. I met with the same evidence here as elsewhere as to the injurious effects of this employment on girls. One witness, a labourer, who had brought up 15 children, says, "I think that it is nought but right " that it was stopped, girls going in gangs. Bad discourse is always going on." (Evid. 114; *see also* Evid. 112, 115.)

42. Evidence 135 to 153 shows the extent to which children are employed in field work in gangs or otherwise in several parishes lying between Sleaford and Boston. Many of these parishes contain large portions of rich land. Children of 8 years of age and upwards and women are very generally employed (Evid. 151), but there are no common gangs except in the parishes of Billinghay and Timberland. Large farms are not common in this district; much of the fen lands are owned and farmed by small freeholders. A great part of the land is heavy and does not require so much weeding as the fen land generally does. (Evid. 151, 152.)

43. The common gang system has been established at Billinghay for more than 40 years. (Evid. 151.) Women are employed in these gangs much more than in other parts. At the time of my visit there were six men who were in the habit of taking out gangs during the spring and summer. These gangs sometimes comprised from 20 to 30 women and children I did not meet with the same testimony as to the evils of gang work here as elsewhere. It seems that the gangs are generally confined to children of one sex, and that the children are often accompanied by their mothers when in the fields.

44. The evidence of the Rev. H. T. Fletcher, Vicar of Bicker, is important, as showing that the evils of field work are not confined to the employment of children in gangs. (Evid. 135.)

Deeping Fen.

45. The part of Lincolnshire where the common gang system prevails to the greatest extent, and where it has long obtained an odious notoriety, is the portion of the south fen district called Deeping Fen.

A.
Want of cottages.

Deeping Fen lies to the south-west of Spalding, between the rivers Glen and Welland. It has been under cultivation since the beginning of the last century, but it is only 30 years since the application of steam power for draining the land has brought the water under complete control and reduced the whole fen into a valuable agricultural district. It contains a number of good farm buildings; the farms being generally about 200 to 300 acres. As yet, however, the farmers with a few farm servants are nearly its only inhabitants, there being hardly any labourers' cottages on it, with the exception of the ground-keeper's cottage, with which each farm is supplied. Almost the entire district is under tillage, consisting of rich corn producing land requiring much labour. Much of this land was formerly in pasture, and has lately been broken up without any additional accommodation for labourers having been supplied.

46. Such being the agricultural condition of the district the farmers are driven to the towns and villages bordering on the fen for whatever labour they can get. Regular day labourers attached to particular farms or employers are almost unknown. The horse work is done by farm servants living in the farmers' own houses or lodging in the few cottages which exist on or near the farms. The rest of the field work is done by "catchwork" labourers and by gangs of women and children coming from Spalding, St. James' Deeping, Market Deeping, Langtoft, and Barton. One witness says with regard to this district, "There are, I believe, many occupiers of, perhaps, 300 acres " of land who have not at this time (about the 14th of December) a single day labourer employed on " their farms." (Evid. 157.) A fen farmer himself says, "I farm 320 acres, all arable land. I have " not one cottage on my farm. I have only one labourer on my farm now. I have four horsemen " lodging about. I have no room for more than one in my own house. I have labourers from whatever place I can get them; they come and go, and we have no hold on them as they are not in " cottages on the land. We can get light work done by gangs. There are 15 or 16 farms about here " similarly situated to mine. The labourers we get have to walk four miles from Deeping. Within " the last six or seven years some of the small owners have built some cottages. The large owners " have not, hardly any of them." (Evid. 173.)

Spalding.

Number of gangs and gangworkers.

47. The greater number of the persons who compose the gangs employed in Deeping Fen reside in Spalding, and there is probably no town where the demoralizing effects of the system are more fully exhibited and recognized. The population of Spalding in 1861 was 8,723. Of this population by far the larger portion are agricultural labourers. I was informed by one of the gangmasters that there are seven regular gangmasters and eight or nine other persons in the habit of taking out gangs from this town. (Evid. 162.) As to the number of persons taken out in gangs he says, "In the busy time each of the " seven gangers would have as many as 40 each. There would be quite as many as 280 out with " them, besides others not under regular gangers." This statement would apply to the number of women and children employed in gangs in the weeding season, *i.e.*, in May and June. In October 1865 there were, according to a return forwarded to me by the Superintendent of Police for the Spalding district, 12 gangs at work, consisting of 153 persons. In the winter months the number of persons working in gangs from Spalding would be much smaller, but at the time of my visit, the first fortnight in December, there were four or five gangs in regular work. One of the gangmasters, whose gang was principally composed of children, says, "I have only had 14 to-day (December 5). I have " 15 belonging to me. We begin about March, and get almost eight months work in the year." Of the 153 persons working in October, 69 were women and girls above 16 years of age. The gangmasters generally have a few regular hands for whom they find employment throughout the entire year, with the exception of a few weeks in winter. They are principally young women hardened to a life of depravity and degradation, with a few boys of 15 to 17 years of age who are prevented by bad character or some infirmity from getting better employment. It is this class who maintain the type of the gangworker in this town from year to year, and become the teachers and leaders of the children with whom the gangmasters enlarge their staff as each season comes round.

Ages of gangworkers.

48. Children begin to work in the Spalding gangs at 7 and 8 years of age. (Evid. 159, 166, 170, 178.) The land on which they are employed is very light, and affords a great quantity of work at which young children can be employed, which could on heavier soils be only done by men. The work in which these gangs are employed at different times during the year consists of weeding, twitch picking, spreading or knocking manure, hoeing, and gathering potatoes, mangold, and carrots. The children bring their own tools. A girl of 13 years of age says, "My father finds me my tools. I have hoes of different " sizes, a muck fork, a carrot fork, a twitch basket, and a twitch rake. I was 12 when I first hoed." (Evid. 170.)

Distances which they go to work.

49. These gangs are employed within a radius of about six miles from the town, at about this distance they are met in Deeping Fen by gangs from Barton, Langtoft, and Deeping St. James. The gangmaster whose evidence I took on the 5th of December had been out "near six miles" that day to a farm in the fen with 14 children. Another witness says, "I know that there are girls whose age does " not exceed 12 or 13 who have to walk every day during the summer months to Peakhill, beyond " Cowbit, which is six or seven miles from their homes." (Evid. 159.) The common gangs are more often employed at a distance of three to six miles than on farms nearer the town, as the occupiers of these farms are generally able to get the hands they require without the intervention of the gangmaster. Sometimes, but it seems not often, these gangs stay overnight at the more distant farms. (Evid. 162.)

Evils of the system.

50. The gang system has long been considered by the inhabitants of Spalding to be the bane of the town. Many of the neighbouring farmers themselves are so conscious of the evils with which the mixture of sexes in these gangs is attended, that they have refused to employ mixed gangs. Some do not employ the common gangs at all. (Evid. 177.) Dr. Morris, for many years the medical officer to the Spalding Union, states that many girls of 14, and even of 13, to 17 years of age have been brought to be confined in the infirmary whose ruin has taken place in going and returning from gang work. He mentions as evils of the system the mixture of boys and girls under no proper superintendence, and the practice of paying the children at 11 or 12 o'clock at night at public houses. (Evid. 156.)

51. Mr. H. Tatham, chairman of the board of guardians for the Spalding Union, and a large occupier of land in the neighbourhood, says, "There is no question at all about the evils of the common gang

" system. The gangers are in many cases the worst characters in the place, men who prefer an idle " life. The evil of the system is the demoralization of the younger workers, arising from the mixture " of the sexes and the entire absence of proper control over the hundreds of girls and children who " make up the gangs in going and returning from work." (Evid. 157.)

Mr. John Leaper, the superintendent of the county police at Spalding, says, " Since I have been " appointed to this post the evil of the gang system as carried on here has been perpetually brought " to my notice. There are many girls in this town between 14 and 20 who are regularly employed in " the gangs while they are at work, and who during the winter time may be seen skulking about the " town and in the neighbourhood of bad houses, showing their depraved state by their language and " conduct." (Evid. 158.)

52. Mr. A. Porter, a bookseller in the town, who had when a boy himself worked in a gang in a neighbouring town, gives important evidence, showing the gross immorality with which the system is attended in this town. He also speaks to the cruel usage of boys by a gangmaster, and the exhaustion, "painful to witness," which children of 10 and 12 years suffer from after their week's work. (Evid. 159.)

53. The return of births for the Spalding registration district for the four years 1862, 1863, 1864, 1865, shows that the proportion of illegitimate to legitimate births in each of those years is about one to seven, being a rate of illegitimacy twice as high as the average rate of the kingdom. Upon making inquiries as to the causes of this low state of morality I found that it was attributed mainly to the corrupting tendencies of gang work. (Evid. 160, 161, &c.)

Pinchbeck.

54. Pinchbeck is a large parish adjoining Spalding, with a population of 1,500 persons. The gang system has existed for many years in this parish, the gangs being principally employed in Deeping Fen, and in that portion of the fen called Pinchbeck Fen.

Number of gangworkers.

55. There have been three gangmasters in this parish during late years, but in 1865 there seems to have been only one gangmaster in regular employment. This man sometimes had as many as 30 children and young women in his gang. He was in the habit of taking them to work six miles off in Deeping Fen. This was the only case I met with where the gangmaster was in the habit of conveying his gang in carts. (Evid. 176.)

Evils of the system.

56. Three witnesses whom I examined in this parish speak to the pernicious influences of the system on the character of the girls.

In the return sent to the Commission the Rev. W. Wayet, the vicar of the parish, writes:—" The " moral effects are exceedingly bad; the language used is shocking to every right-minded person. " Cases of seduction by the gangers themselves of quite young females. It is highly desirable that " the system should be abolished altogether, or at any rate placed under very stringent regulations. It " is an almost unmitigated evil, and detrimental to the educational, moral, and religious welfare of the " rising generation." (Evid. 175a.)

57. Mr. William Robinson, a gentleman occupying 250 acres in the fen about three miles from Spalding, expresses strong disapprobation of the system, owing to its demoralizing influences. He had himself given up the practice of employing a mixed gang for six years. It will be observed that this witness had learnt the evils of the system as they appeared in private gangs of mixed boys and girls in his own employment, and under the supervision of one of his own labourers. (Evid. 177.)

58. William Lloyd, an old man who had for many years himself been a gangmaster, says:—" Several " girls have kept with me to 17 or 18 years of age. It is very bad work for girls. I think it were a " deal better if they were not allowed to go at all." (Evid. 179.)

The other places which supply the gangs employed in Deeping Fen are Baston, Langtoft, Market Deeping, and St. James' Deeping.

Baston.

59. Baston is a village lying about 12 miles from Spalding on the west side of the fen. Its population is returned as 787. For 30 years children and women have been in the habit of working in gangs from the village. There were three gangs at work during 1865.

60. The following statements in the return sent to the Commission by the vicar of this parish are important:—

" Some children are hired as young as 6 years."

" The average distance (which the children walk to work) is three to four miles; a few boys from " an adjoining parish as much as six. Two little girls who reside in this parish have walked " five miles to and back from their work during this summer, the eldest not being more than 10 " years old."

As to treatment:—" If idle or careless they are excited to greater care and dilligence with oaths and " curses and an occasional kick, and if they fail they are beaten with a stick."

As to influence of the employment on their physical condition:—" Very injurious, as they get wet, " especially when pulling or digging mangold wurtzel in the winter. In the spring, when weeding in " the wheat, they get wet up to their middles, and have to take their meals in wet clothes. The females " complain very much of this."

As to the state of their education:—" Very defective, many not being able either to read or write, " and being too tired to attend a night school."

As to the moral condition of the gangworkers:—" Most lamentable. All the parents of these " children with whom I have conversed on the subject of the gang system acknowledge the great and " incalculable moral evils arising from it, and several refuse to let their daughters go to the work. I am " informed that the conversation and songs when at work and returning home are most obscene and " disgusting, and that it is quite common to hear children not above 8 years old swear." (Evid. 181.)

Langtoft.

61. The village of Langtoft is situated on the western border of Deeping Fen, between Baston and Market Deeping; its population is returned as 746. There are two gangs regularly employed from this village, and sometimes three. The number of persons employed in these gangs in 1865 was 42; of these 16 were girls and young women above the age of 13.

62. It is stated in the return sent in by the Rev. J. Warren, the vicar of this parish, that these gangs sometimes go as far as eight miles to work. (Evid. 188a.)

63. Their hours of work in summer, dating from the time of assembling for their journey out, are from about 5 a.m. to 7 p.m.

A.
Evils of the system.

64. As to the effects of the system Mr. Warren writes, "I consider the mixed gang system productive "of the greatest evils. The language of the boys and girls is notoriously blasphemous and indecent, "and their conduct tallies with it. Moreover, the girls become unsettled by the kind of life, and "unfitted for service." As an illustration of the effect of gang life on the habits and characters of the girls this witness stated that it was a common practice with these girls when unemployed to wander about the country in search of wool. Two girls belonging to Langtoft had lately been convicted of wool stealing; they were in the company of four other young women from the same parish, and at a distance of 10 miles from their homes.

Market Deeping, and St. James' Deeping.

65. The villages of Market Deeping and St. James' Deeping form a straggling town on the southern border of Deeping Fen, containing a population of about 3,000 persons. There are three gangmasters in these parishes, two of whom are principally employed in Deeping Fen. I found that one of these had been working with his gang for four or five weeks in April and May 1866 on a farm lying from six to eight miles distant. (Evid. 187.) Every day in the week the children had walked out and back from their work. In this gang there were three boys, one about 9, one about 8, and one between 7 and 8 years of age. (*Id. note.*) In November 1865 there were 61 children at work in these three gangs.

Common gang well conducted.

66. The evidence of the Rev. W. Hildyard, rector of Market Deeping, shows that even common gangs can be well conducted, and that the evils attending the system so prominently exhibited in Spalding and other neighbouring parishes are not to be entirely attributed to the system. Mr. Hildyard says, "The other two occupiers employ a gangman; the same works for both. He has a mixed gang of "boys and girls. He conducts his gang well. He is a very respectable man. This gang is so well "conducted that I cannot complain of any evils resulting from it." (Evid. 182.)

Crowland.

67. The populous and poor village or town of Crowland is situated in the midst of a large tract of fen land, being about as much isolated now as it was formerly, when its environs were water and impassable bogs. Its population in 1861 was 3,148, consisting almost entirely of agricultural labourers and their families. These labourers are employed within a radius of about four miles, there being very few labourers' cottages within six or seven miles from the town.

Number of gangs and gangworkers.

68. The gang system has been established here for more than 40 years. There were two gangmasters at the time of my visit. One of them had carried on this occupation for 40 years. About 100 children under 15 years of age are employed in these gangs during about eight months in the year. Besides the children belonging to these gangs children and women are very generally employed in private gangs by the larger farmers and on the small freehold occupations near the town. (Evid. 202, 203.)

69. The common gangs are regularly employed at about three and four miles from the town. One of them is occasionally employed on Thorney Fen, at a distance of about six miles.

Arrangement for separating the sexes.

70. About eight or nine years since some of the farmers in this parish, being ashamed of encouraging a system which was attended with such manifest injury to the children employed on their farms, agreed with each other not to employ mixed gangs of boys and girls. For a few years the practice of separating the sexes was observed, but has lately been abandoned, for what reason, except the death of the farmer who took the most active part in the arrangement, I was unable to ascertain. (Evid. 202.) One of these gangmasters still only employs boys, but the children are mixed in the other gangs.

71. It appears that the wages of the children employed in gangs in this parish are limited to 6*d.* a day. The gangmaster's wages are 2*s.* 6*d.* when he is himself employed. He sometimes takes as many as 40 children with him. According to one witness 80 children used to be taken together in a gang. (Evid. 205.) The practice of hiring children of the gangmaster prevails here, but it seems that he receives no recognised payment beyond the money paid as the children's wages. (Evid. 203, 205.)

Parishes east of Spalding, similar.

72. The district which lies between Spalding and the Wash comprises a tract of rich alluvial soil recovered from the sea, of a somewhat similar character to the fen land. The population of this district is principally located in populous villages or towns, and the want of cottage accommodation near the land on which they are employed is much felt by labourers as well as by their employers.

73. Common gangs have very recently been employed both in Holbeach and Long Sutton, and it seems that the system of letting work to gangmasters was introduced last year into the parish of Gedney Drove End. (Evid. 201.)

74. The employment of children in gangs by the farmers themselves is very general in these parishes on the larger farms, and is considered a great evil. (Evid. 193 to 201.)

75. Some of the land in this district is cultivated by small freeholders, as in the middle fen district and Isle of Axholme. The wives and children of these men are on their fields throughout the summer and autumn, but it seems that the interference to education is the only manifest evil attending their occupation. (Evid. 206.)

76. From the information which I received it appeared that no common or travelling gang system existed in any other part of Lincolnshire than in these districts which I have mentioned, and that children and young persons were not employed in farm gangs to any greater extent than on the Heath or Cliff district.

Northamptonshire.

77. From the negative answers given to the questions issued by the Commission and from other information which I received it seems that no recognised gang system prevails in this county, except in one or two parishes in its north-east angle, and I did not consider it to be my duty, under the instructions which I received from the Commission, to prosecute any further inquiries as to the extent to which children might be employed in small farm gangs in this county.

78. Evidence 207 to 209 relates to the parishes lying in this county between Lincolnshire and Huntingdonshire. These parishes are small, and free from both the agricultural and social peculiarities of the fen parishes. The gang system, introduced probably from the neighbouring fen districts, seems never to have prevailed much.

Huntingdonshire.

79. The gang system has been during late years established in all the parishes situated in and bordering upon the low fen land which forms the north-eastern portion of the county. The villages

from which the common or travelling gangs employed in this district are principally drawn are Yaxley, Farcet, Stilton, Ramsey, Ramsey St. Mary's, Warboys, and Somersham.

Yaxley.

Number of gangs and gangworkers.

80. The village of Yaxley is situated on the north border of the fen called Whittlesey Mere. Its population is returned as 1,414. There were four gangmasters in 1865 in this parish, employing about 160 children and young women. The number of persons employed in these gangs in 1864 was about 200. One witness says, "I believe every child in Yaxley is in a gang. If I wanted a boy to tend " sheep I should have to hire him of the ganger." (Evid. 218.) From the return sent to the Commission it appears that of the children working in the gangs there were 81 between the ages of 7 and 13, and three girls and two boys under 7 years of age. Several children are employed in these gangs from the neighbouring parishes of Stilton and Farcet. These gangs are principally employed in the fen land to the south-east of the village, but I found here, as at other places, that the gang system is to a great extent supported by the want of labour in neighbouring parishes, where the cottage accommodation is insufficient. (Evid. 210, 217, 218.)

System on which these gangs are engaged.

81. The system on which these common or travelling gangs are employed is for the farmer to pay the gangmaster 14*s*. or 15*s*. per score children, leaving it to him to earn what he can for himself by getting his children at a low rate. The tendency of such a sytem is evidently to force children into field work at the earliest age possible, for the purpose of swelling the number of the gang.

Distance at which they work.

82. From a statement in the Returns sent to the Commission from this parish it appears that these gangs are employed at distances varying from one to seven or eight miles. When they are at work a long distance from home they are often put up for the night in a barn belonging to the farmer. One witness, who had been a large occupier of land in this parish, mentioned, as an illustration of the hardships which the young children undergo in these travelling gangs, that he had lately met a little lame girl of 10 years old on her way home from work; she had to walk six miles out and back. This witness says, "I wish the common gangs were put an end to. It is very bad for the little " children that they should go to work so far." (Evid. 211, *see also* Evid. 216*a*.)

Evils of the system.

83. As to the evil effects of the system, the Rev. C Lee, vicar of this parish, thus writes:—" The " gang system is the most ruinous that ever could be invented, detrimental to all morality, virtue, and " sense of religious feeling; the language of the greater number of them being of the most offensive " nature, and in the next generation must prove injurious to any parish where such a system has " been adopted." (Evid. 210.)

84. The children from this and the adjoining parish of Stilton are often employed in the fen land which is included in the parish of Holme, and the condition of these children and the general character of the system under which they are employed has been brought before the notice of the principal landowner in this parish. In a return sent in to the Commission this gentleman thus writes:—" Lots of " workers, composed sometimes of girls full grown alone, sometimes of children, go out under the care " of gangmasters, and abuses, occasionally even attracting public notice by being recorded in the local " papers, not unfrequently occur. The little children, instead of being brought up from infancy " under the improving influence of school habits and teaching, spend the whole livelong day for seven " months in the year, without their thoughts or intellects being even guided in any good or worthy " direction, and too often in listening to and learning to join in conversation of a lowering and " degrading kind." (Evid. 219.)

Stilton.

85. The pernicious operation of the gang system on the character and habits of the young labouring population is very much observed in this parish. Its population is 720; about 40 children and young persons are in the habit of working in gangs. From the return sent in to the Commission by the Rev. Thos. Hutton, vicar of the parish, it appears that of the number four boys and one girl were under the age of 7 years.

86. Many of these children are employed under gangmasters residing in Yaxley. They work at distances of from one to six miles. Their usual hours of work in the field are from 7 or 8 o'clock in the morning to 5 o'clock in the evening. When they are working at long distances they leave home at about 5 o'clock in the morning, and do not reach home again till between 7 and 8 o'clock at night.

Evils of the system.

87. As to the effects of the system, Mr. Hutton writes:—" The whole system is essentially corrupting " and demoralizing. It makes the girls so rude, rough, and coarse that they are neither qualified for " domestic service nor willing to submit to its restraints. I have frequently noticed a marked change " for the worse in the conduct of girls from the first month of their joining the gang. Mixed gangs " are ruinous to the girls. I cannot conceive a system more calculated to destroy all sense of modesty " and propriety of conduct. Instances of juvenile prostitution and immorality occur in connexion " with the gangs that are a scandal and disgrace to a Christian country." (Evid. 216.)

Ramsey, and Ramsey St. Mary's.

88. The town of Ramsey contains a population of 4,500, and is situated in the centre of the fen district of Huntingdonshire. Ramsey St. Mary adjoins Ramsey, and contains a scattered population of 1,088. The majority of the labourers' children of both these parishes are devoted to field work from the earliest ages. There were 11 gangmasters at the time of the inquiry employed in these parishes. These gangs during the weeding season consisted each of about 20 persons, of whom half were children under 16 years of age, and the others girls and women.

89. These gangs are employed within a radius of six miles; they are met at this distance by gangs from Whittlesey, Benwick, and Chatteris on the north and north-east, and by gangs from Sawtry and Warboys on the south and west.

Evils of the system.

90. As to the character and effects of the gang system as observed in these parishes, the Rev. W. Collins, perpetual curate of Ramsey St. Mary's, thus writes:—" Having had constant opportunity of watching " gangs during work hours and meal times, and also on their journey homewards; having followed " young children, especially girls, in their after lives; having watched to some extent the several effects " of the system upon population, it is my belief that the system as it at present exists lowers the " moral tone of the district.

" From careful personal observation I can say that the language common among young women, " girls, and boys is shocking beyond belief; that indecencies are common; that the gangmasters are " persons of very improper character and conduct. I do not, of course, mean in every instance, "but not unfrequently. I mention one instance of a gangmaster's behaviour I witnessed lately: I "heard a man swearing fearfully, and on looking to see who he was, I saw a gangmaster returning "home with a mixed gang of women (some elderly) and children (boys and girls). He was very "drunk, and held up on each side by a woman, while the children mocked, jeered, and laughed. I "could multiply such cases, but it is not necessary." (Evid. 230.)

Warboys. Number of gangs and gangworkers.

91. The village of Warboys is situated in the confines of the fen district, and a large tract of fen land is included in the parish. Its population is returned as 2,000. There were 13 gangs in regular employment in this parish during the spring and summer of 1865, three of which were common or "job" gangs under independent gangmasters. The total number of persons returned as employed in these gangs is 270. This number includes 130 children between the ages of 7 and 13, 70 girls between the ages of 13 and 18, and 70 women, single and married, above the age of 18.

Distance at which they work.

92. These gangs are principally employed in the fen land to the east and south; on the high land of the parish they are very little employed. They generally work on land from two to five miles from the village, occasionally on a part called Gant Fen, which is about six miles distant. I found two children who had worked in Gant Fen in November 1864. One was a girl of 11 and the other a boy 8 years of age. The girl says, "I went there two days running. I twitched. There were about 20 of us "altogether. They were all little ones. There were three girls younger than me. It was in "November when we worked there. Some of us cried for cold. We started at 7 in the morning. "We got home at 7 at night. We left the land about 5." (Evid. 222, 223.)

Somersham.

93. Somersham is situated on the south-east border of the fen district. It contains a population of 1,653 persons. There were two common gangs in this parish in 1866, in which about 50 children and young women were employed. These gangs were employed at distances of from one to four miles.

Evils of the system.

94. In his return sent to the Commission, Dr. Pinnock, the rector of this parish, thus writes with regard to the effects of the gang system, "Ganging is very injurious to females, because of the unsettled "nature of the employment and exposure to all weathers. It is only the least respectable that so "work, and the immoral girls contaminate not only their fellow workers, but those at home also. The "system generates immorality, irreligion, and vice most fearfully." (Evid. 235*a.*)

Private or farm gangs.

95. It appeared from the information which I received as to the rest of this county that no common gang system existed in any parish. The practice of employing children in farm gangs was more or less common, and in some parishes a recognised evil. (*See* Evid. 226, 227, 228.)

Cambridgeshire.

96. The employment of women and children in gangs, by both common gangmasters and by the farmers, prevails to a very great extent over the whole of the northern portion of this county, which comprises the Isle of Ely, and in those parishes which lie between the Isle of Ely and Newmarket. The Isle of Ely, with the exception of a tract of high land on the south-west, consists almost entirely of low fen land under tillage. The labouring population by which it is cultivated are located for the most part in large towns or villages about seven or eight miles distant from each other; a few cottages only being distributed about the fen.

March.

Number of gangs and gangworkers.

97. March contains a population of 5,455, consisting principally of agricultural labourers, who are employed on the surrounding fen farms to a distance of three or four miles. It appears from the return sent to the Commission that there were nine gangmasters in this town, and that 388 children and women were working either under these men or in detached parties during the summer of the present year.

98. The gang system as it prevailed at March 20 years back is thus described by a witness who formerly farmed in this neighbourhood:—"When I lived about four miles from March I used to send overnight "to a ganger, and he would bring as many hands as I wanted. They had to come about four miles to "my farm. They used to go six or seven miles to my father's land. These children used to gather on "March bridge 500 or 600 at a time, and then go off in all directions with their gangers. I have had "60 on my farm for days and weeks together." (Evid. 32.)

Distances at which they work.

99. These gangs sometimes comprise as many as 30 persons now; but they are more generally divided into smaller parties of 12 to 15. Children begin to join them at 7 years of age. Boys work in them up to 15, and girls up to 18 and 19 years of age. (Evid. 240.) Women above this age are generally employed separately by the farmer. These gangworkers are employed on the farms round the town to a distance of five miles. Sometimes they go six miles to work. One witness says, "My little girl of 10 has been "working four miles off this week. Last summer they went for days and days to Peartree Station and "Friday Bridge, near Wisbech; that is six miles from March bridge. (Evid. 243.)

Number of months during which they are employed.

100. The length of time during which the children are thus occupied appears from the evidence of the mistress of the girls' charity school:—"The number of girls attending this school in the winter is "about 140. At the end of February or the the beginning of March the children begin to leave for "field work. At the present time (May) we have only 45 out of the whole number. They are either "children who are too small to go to work or of a better class. The children who have gone "will not come back until after the potato picking is over; that will be about the beginning of "November." (Evid. 242.) I met with the same testimony here as elsewhere as to the effects of gangwork on the character of those employed in it. (Evid. 238, 239.)

Doddington.

101. Doddington is a scattered village about four miles from March, containing a population of 2,290. There were seven gangmasters, employing 222 women and children, in this parish during the summer of the present year.

Benwick.

102. Benwick is a comparatively small village lying between Doddington and Ramsey in Huntingdonshire, with a population of 773, out of which no less than 65 children between 7 and 18 are employed in gangs. These gangs are here called "running" gangs. They were employed at distances ranging up to five miles from home. Their work begins in March and lasts to the middle of November. (Evid. 247.)

Chatteris.

Number of gangs and gangworkers.

System of letting out children.

103. The town of Chatteris has a population of 4,731. I was informed that between 300 and 400 persons were at work in gangs from this town at the time of my visit. (Evid. 249, 250.) There are only three gangmasters in this town, but the system of letting out children to farmers at ½*d.* per head per day in addition to the children's wages is carried on to a great extent by these gangmasters. Two of these gangmasters have from 150 to 200 children attached to them during the summer. "Every "morning in the summer time about 100 to 130 children and women will be at the ganger's house at "about 6.30. They will then divide their children into lots or sections and marshal them off to

"different farms, under different superintendents, generally some elderly girl or woman of 20 to 25 "years of age." (Evid. 250.)

104. The Rev. M. A. Gathercole, the vicar of the parish, gives a very complete picture of the gangworkers "life and habits," as exhibited in this town. (Evid. 249.) The system is looked upon as a great evil by several of the farmers and other inhabitants of the town. (Evid. 250 to 254.)

105. The same system of employing children prevails to a certain extent at Manea (Evid. 256–260), at Prickwillow (Evid. 290 to 295), at Ely (Evid. 278, 289).

Ely.

School attendance.

106. The evidence which I obtained in Ely is important, as showing that the employment of children may be reduced to a minimum even in the fen district by the mode in which the school attendance is encouraged or enforced. In the Ely schools I found more than 400 children in attendance during the very months when the schools in many neighbouring parishes were almost emptied, and that out of this number only four boys had been at field work at all. I was informed that 65 suits of clothes are given every year as a reward for attendance and good conduct, and that absence for more than six weeks disqualifies a boy from receiving them. It is probable however that at Ely the residence of a larger proportion of persons of the upper class, many of whom take an active part in promoting the welfare of its agricultural population, may render the advantages of education more obvious than in remote fen towns and villages. There are however still three or more gangs working from Ely. One gangmaster says, "I have been in the "habit of taking children out to work for 30 or 40 years. Many more children went out then than "now. I think that children go to school more now than they did. I find it difficult to get children "now. I should like to have 15, but I can't get more than from 8 to 12. (Evid. 278.)

Private gangs.

107. At Littleport, Downham, and the other parishes in the Isle of Ely to which the evidence relates (Evid. 261–277), except Sutton, common gangmasters are not employed, but women and children are employed to a very great extent in field work, both in farm gangs and separately. One witness, a gentleman farming 1,100 acres in the parish of Littleport, was employing 40 women and children at the time of my visit at hoeing, weeding, and twitching. They were divided into four parties; each party was superintended by a farm labourer." (Evid. 261.)

108. These gangs are better conducted than the common gangs. Some of their employers attempt, to a certain extent at least, to prevent the evils arising from the mixture of sexes. (Evid. 261, 265, 266; *see contra* 276, 277.)

109. In most of these parishes the employment of the gangworkers is confined to the particular parish to which they belong, and they are not taken long distances.

Soham.

110. The town of Soham is situated to the south-east of the Isle of Ely. It has a population of 4,283. The land in this parish is very rich, and the system of cultivation such that children and women are employed in large numbers during the greater part of the year.

111. There were 270 women and children at work in about 14 separate gangs in this parish at the time of my visit (May 1866). (Evid. 297, 297*a*, 299.)

112. Cases have occurred in this parish during late years showing the grossest profligacy on the part of gangmasters, and the evils of the system have appeared here in their worst form. (Evid. 297a, 302.)

Private gangs.

113. In several other parishes in this neighbourhood the gang system prevails (Evid. 305 to 308), but the children are employed by the farmers and not by common gangmasters. A case of disgusting misconduct occurred at the time of my visit in the parish of Isleham on the part of one of the men employed as a ganger towards the children under his charge; but these parishes afford instances of very respectable gangers. (*See* Evid. 309.)

Gangs employed in gathering coprolites.

114. In the rest of Cambridgeshire the system seems to be but little known, except in a few parishes where children are employed gathering coprolites, an employment hardly coming under the category of agricultural labour. The employment of children in small sets or gangs under old men during the summer for pulling charlock, or cleaning the land of other weeds, is common in many parishes; but it seems, from the returns sent to the Commission and from the other information which I obtained, that women and children are not more employed in field work in this part of the county than in other counties to which our inquiry was not extended.

Gangs at Woburn in Bedfordshire.

115. Being informed that it has been the practice for many years to employ gangs of boys about the park and grounds of Woburn Abbey in Bedfordshire, I made inquiries as to the number and ages of the boys so employed in August last. It appears that there have been for 20 years three gangs employed upon the farm and grounds at Woburn, numbering altogether between 70 and 80 boys of ages ranging from 8 to 15. There seems to be a rule recognised, but not strictly observed, that the boys should be 9 years of age at least, and able to read and write. For a short time the boys employed in these gangs were given two hours education every morning, but this practice has been discontinued. (Evid. 319.)

Legislative remedies suggested.

116. As many persons have expressed their opinion that it would be desirable to apply some legislative remedies to the evils attending the employment of children in agricultural labour, I will mention shortly the various suggestions that have been made. With the object of removing the more prominent evils of the gang system it has been suggested,—

(1.) That the common job gang system should be altogether abolished by some regulations which would prevent children being employed except by the occupiers of the land on which they work.

(2.) That the system should be subjected to certain regulations; that the respectability and fitness of the gangmasters should be insured by rendering it necessary that persons undertaking this employment should have a certificate or licence. This regulation has been suggested both by farmers and gangmasters.

(3.) That the mixture of sexes in gangs should be prohibited. The practicability of such a regulation is shown by the fact that it is now observed in some parishes in the case of both common and private gangs.

(4.) That girls should not be allowed to work in mixed gangs above the age of 13 or 14, or boys above the age of 12.

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(5.) That no girls or women above the age of 15 should be allowed to work in gangs at all. (Evid. 234.)

I have already observed that the more prominent evil of the gang system as exhibited in what may be called the gang districts is the corruption of the moral character, more especially of females, resulting from the continued employment under the system of children and young persons above the age of 13 or 14; and it is to meet this evil in particular that the above suggestions are pointed. Other persons, recognising the difficulty of enforcing any legal regulations applicable only to such an indefinite system of field labour as the gang system, and considering at the same time that the evils of this system are more or less common to the employment of children and young persons in field work generally, are of opinion that these evils can be best met by regulations of universal application.

117. It has been suggested that the total prohibition of the employment for hire in field work of girls under the age of 13 or 14 might be enforced with very little loss either to the parent or the farmer, and that the exclusion of girls from the fields up to this age would tend not only to prevent theirbeing diverted from the more appropriate occupation of domestic servants, but to confine them to their homes in after life. (See statement of the Venerable Archdeacon Mackenzie, Evid. 196. See also opinions of farmers, parents, &c., Evid. 6, 7, 28, 86, 114, 198, 199, &c.)

118. Others consider that the evils attending the employment of children in field work, both in gangs and otherwise, can be best met by subjecting such employment to regulations of the same character as those which have been so successfully carried out in many manufacturing trades.

119. As regards the work itself, the half-time or alternate day system could be probably carried out with less inconvenience than in many manufacturing trades. The difficulties of carrying out such a system would seem to consist in the irregular nature of the employment, and the constant change of masters. The half-day system would clearly be incompatible with the employment of children at long distances from their homes. (See on the question Evid. 135, 219, 220 (13), 234, 306a.)

Children not necessary to the farmer.

120. My inquiry being limited by your instructions to employment of children in gangs, I did not obtain information as to the extent to which children are employed separately or as assistants to their parents or other persons in these counties, or as to the evils attending such employment, nor could I by extending my investigations in districts where the labour of women and children is very little used obtain evidence showing how far such labour could be dispensed with. The fact that there are a few large occupiers, even of fen land, who employ such labour very little, if at all, as well as the opinions of many practical men, tend to show that the increase of expense attending the non-employment of children and even women in field work would be but small. It is not on poor land, but on land which affords a rent of from 40*s.* to 50*s.* that women and children are employed in the greatest numbers. There are a few operations, such as gathering potatoes, for the performance of which little children and women are clearly the most appropriate instruments, but there are probably very few agricultural operations which could not be effected with equal economy by men and machinery if it was the true interest of the working class that women and children should not be used.

Why women are cheaper than men.

121. Of the different operations which are usually performed by women and children in the gang districts, some are dispensed with altogether on some farms by the use of machines or a different system of tillage, and some are performed by adult labourers or boys. One reason why women and children are cheaper than men would seem to be that it is too much the propensity with agricultural labourers for the younger and weaker to put forth their strength to the utmost, and for the able-bodied to do much less than they can, so long at least as they are paid by day wages. One witness states "strong girls who are always hoeing can do the work as well or even better than men who are generally at horse work, and they only cost 1*s.* 6*d.* a day instead of 2*s.*" (Evid. 241.) The true explanation of this fact will probably be found in the following statement of another neighbouring fen farmer who objects to employing women and children, but who employs his men on the piece work system: "I get all my weeding done by men and boys. I pay 2*s.* an acre for hoeing, and 1*s.* an acre for weeding. The regular day wages are 10*s.* a week, but the men very seldom get only this. Nearly all my work I get done by piece work. The men get from 13*s.* to 15*s.* a week by working by the piece. I consider that the same number of men do twice the work when employed on the piece work system to what they do when working for day wages." (Evid. 290.)

Another witness says, "All farm work but the horse work can be done by the piece; at a fair calculation a man does half as much again on the piece work system to what he does on the day wage. He does more than that I think." (Evid. 252.)

Another witness, farming 500 acres of fen land, says, "I have not employed any gang this year. I use the horse hoe. I should employ my own labourers for weeding. I may have a gang for about a week. I don't like them. I had one last year. The snatch hoe is used a good deal about here. A man can do twice the work with that. This has helped to do away with the gangs." (Evid. 213.)

Another witness, farming 180 acres of fen land, says, "I never employ a gang of any kind. I have a horse hoe; the horse hoe can hoe 10 acres of either beans, peas, or wheat in a day. I should have three women to weed the drills after the hoe." (Evid. 212.)

Difficulties attending the exclusion of girls from fieldwork.

122. As regards children of both sexes under 10 years of age, the amount of work they do and the wages they earn are both so small that their employment cannot be attended by any advantage to counterbalance the loss of education which it entails. (See Evid. 243, 254, &c.) The proposal to exclude girls above that age from field work involves questions of greater difficulty. It is between the ages of 11 and 15 that girls are employed to the greatest extent; it is their employment at this age which has the worst influence on their after life, and it is during these years that the earnings which they can obtain in fieldwork are most needed by their parents. It is when their elder children arrive at this age that the parents of large families are most in need of a larger income than the father's wages will bring, and it is during these years that girls in agricultural parishes cannot, generally speaking, either assist or relieve their parents by any other means than by field work. Girls are taken into service both by farmers and small tradespeople at 13, 12, and even 11 years of age, but the number of places for girls of this age, even in towns, are very few. That household service is a more suitable and respectable occupation for girls than field work is fully recognised by all parents, and the duty of keeping them out of the fields until they can get situations is very generally admitted, but it would

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seem very doubtful whether in the more remote and populous agricultural villages there would not always be a considerable number of girls who could not get situations, even if they had the same assistance which is given in smaller parishes by the upper classes residing in them.

A.

Pecuniary advantages of the gang system to the labourer's family.

123. The employment of women and children to perform a large portion of agricultural work which would otherwise employ a larger number of men, has necessarily the effect of distributing the wages paid by the farmer among a smaller number of families, and it certainly seems that the ordinary scale of living of a labourer's family in the fen villages is superior to that of the agricultural labourer in most counties.

The Rev. M. A. Gathercole thus describes the meals of the gangworkers in Chatteris: "One hour " for dinner or luncheon, which consists of bread and salt pork or cheese or butter, or of fruit cakes " or rolls. Their chief meal being what is called the supper, but is a dinner at the fashionable hour " of 6.30 or 7, when they have hot puddings, hot meat and potatoes, and other vegetables, &c., when the " whole family sit down together, the mother, who generally gets her tea at 4.30 or 5 chiefly waiting " on the family." (Evid. 249.)

The weekly earning of six members of a family at Soham, where the ordinary rate of men's wages was only 10*s.* a week, amounted to 1*l.* 17*s.* 6*d.* (Evid. 300.)

Another gentleman residing in Chatteris says, "My reason for objecting to the gang system is that " it produces such ill manners and bad conduct in the children. It is a fact to my own knowledge that " the parents of large families will remain at home idle as soon as they get their children to work. " The large families are the best off in this place." (Evid 252.)

Want of cottages a cause of the gang system.

124. I have already observed that the depravity of the gangworkers in some districts has been attributed to the debasing influences of their homes, more particularly to the crowding of persons of different sexes and all ages in their sleeping rooms. Dr. Morris states that the crowding of labourers' houses is a great evil in Spalding. (Evid. 156.)

The rents of labourers' houses in most of the villages and towns from which the gangs are drawn range generally from 4*l.* 10*s.* upwards. (Evid. 162, 181, 258, &c.)

The want of a proper distribution of cottages over the lands on which the labourers of these districts are employed is a manifest evil which I have already noticed. The evidence taken in different districts confirms the opinion given by many farmers that the principal cause of the common gang system at least would be removed by a better distribution of the labouring population; and if the great extent to which women and children are employed in the fen districts is correctly attributed, as it generally is by the fen farmers themselves, to the want of men, it would follow that an increase of cottages in these districts would not only tend to abolish the gang system, but would also diminish the evil which consists in the excessive employment of women and children.

I have the honour to be,
Gentlemen,
Your obedient servant,
FRANCIS D. LONGE.

December 31, 1866.

Evidence on Agricultural Gangs, collected by Mr. F. D. Longe.

LINCOLNSHIRE.

THE WOLDS DISTRICT.

Lincolnshire.

The Wolds District.

Mr.F.D.Longe.

a.

ELKINGTON, pop. 441. 1. *The Rev. W. Smyth*, vicar, Elkington Hall.—Gangs from Louth are employed at various work in my parish and in the neighbouring wold district. These gangs consist principally of Irish settled at Louth. They comprise women and children, under a ganger. The ganger takes work from the farmer for a certain sum, and employs the women and children to do it. The inhabitants of our own parish do not join them. Most of them are sufficiently employed by the farmers, independent of the gang work. They are employed in field work, but not in gangs. The gangs are now taking up mangold wurzel and swedes. We do not grow any potatoes. Women hoe as well as weed. Women and children also help to bind in the harvest field. I continually meet gangs of women, and a few boys and girls; their numbers vary from 10 to 20; they go 6 or 7 miles; they go as far as Wold Newton, which is 9 or 10 miles to the north-east, and to Stennigate, which is to the south-west of Louth. The effect of the gang system on the moral character of the persons employed has never been brought before my notice, either as a justice of the peace or in any other way. I never heard it spoken of as demoralizing. The men are apt to get tipsy sometimes. In the wolds the farmers employ what are called confined labourers. They are generally married men living in cottages on the farms. Their pay comes to about 40*l.* or 45*l.* per annum. They are hired for the year, and very often change every year. They do not do this now so much as formerly. The general proportion is one cottage to a hundred acres. A farm of 500 acres would have five cottages belonging to it. Besides the confined labourers farmers have farm servants to look after their horses.

2. *Mr. Edward Locock*, farmer, Elkington Grange.—My farm is 430 acres. There are seven cottages on it. Each cottage is inhabited by a married man hired for the year; besides these labourers I have farm servants, and I sometimes have one or two other day labourers, who lodge in these cottages. Besides this labour there are times in the year when I want other labour, which a gang would supply. Whenever our own labourers have children able and ready to work they would be employed first. Sometimes our labourers' wives work too. These persons would do the same work, and work the same hours as the gang. The children would begin at 9 or 10. Now there is a difficulty in getting children, there is so much competition for them. It is cheaper to have women. We give women 1*s.* or 1*s.* 3*d.* Children get 9*d.* to 1*s.* When I employ a gang, if it was for pulling twitch, I

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should pay them by the day; we should do this because we cannot value such work. There is not much weeding corn in the wolds. Stubbing thistles is also paid by the day. I have never heard of the people in gangs behaving in an indecent or disgraceful manner; they number sometimes as many as 20. A man seldom takes more than 20. Several gangs go out of Louth.

Lissington, pop. ——. 3. *Mr. William Seagrave*, farmer.—I farm at the foot of the wolds. We have no gangs in our parish. I know the system well; there is plenty of it in the wolds. You will find it at Withcall and Stennigate. We grow the same crops as in the wolds. Part of the wolds is on chalk. We use children in our neighbourhood for weeding, twitching, singling turnips. The difference between the two localities is this,—with us the labourer's cottages are close to our farms, and when we want children their fathers bring them; they can easily be got. We are in the habit of letting weeding and turnip-hoeing to our men. A man would bring two or three children or his wife to help him; he would hoe, and they would single; a boy of 8 or 10 years old would do more singling than a man; he has not so far to reach. Wages about us are 2*s.* or 2*s.* 3*d.* The boys and girls get 6*d.* or 10*d.*; women get 1*s.*

In the wolds the labourers' houses are in many cases very far from the farms. There are some large parishes with no labourers' cottages in them. The women and children have to go many miles to work. I do not think that the want of labourers' cottages near to a farm affects the rent; the fact is, whenever a farm is to let the competition for it is so great that, although a farmer is undoubtedly a loser by not having his labourers near him, it does not affect the price he offers. The gangs are principally employed in the wolds at picking stones, weeding, and singling turnips. The gang system is decidedly the cheapest for the farmer, and decidedly the worst for the children.

There is more twitching in fenny or sandy soil than in clay. Every fourth year in most farms a field is cleaned, and the children are employed to pull out the twitch.

Louth, pop. 10,667. 4. *The Rev. Henry Hall*, Roman Catholic priest. — Nearly all the children belonging to me go out to work in the fields, frequently under a ganger, who pays them so much for the day, and contracts with the farmer for the job. I know two or three gangers. I have heard that Kenny and Regan are kind gangers. I have heard of other men being rather too pressing on the children, but I never heard of the children being ill-used or beaten. I have heard of girls and others going out in numbers of 12 or more. Girls of 13 to 15 years old go out. Older girls go out in times of poverty. I am not aware that women go. They go to Withcall and Coates, which is six or seven miles off. Stone picking is the principal work they do. They also pick up twitch and ketlucks. The children would be generally 10 or 11 years old. I do not know of any demoralization accruing from the system. Coarse language will be used by them I dare say. This class of people do use coarse language.

5. *Tom Kenny*, labourer and ganger, Spital Hill.—For six years I have been in the habit of going out with children. I get tolerably regular employment from May till October. I sometimes take out 10, and sometimes 20 women and children. The children don't go before they are 12 or 14. Out of 20 I should have 10 children and 10 women on the average. Sometimes I have as many as 40. The work we should do would be weeding, flint picking, getting wurzell, twitching, pulling ketlucks, thistles, and dockings, singling turnips. I take the singling after the hoeing is done. May be I do not go till a month or so after. Sometimes I go as far as Ruckland; that is six miles off. I go to Welton, which is five miles off. The little children go the long distances the same as the others. When we go to these places we have to start work about 8 o'clock, and leave at 5 o'clock. We take two hours to walk out, and two hours back. Sometimes I do jobs by day work. The least wage I pay is 8*d.* Children are cheaper in the country. They are confined there. Cumming is another ganger. He is out to-day with four or five women getting up mangolds. I am going out on Monday to get up mangolds and swedes. I shall take about a dozen. I have been picking stones for the last five weeks since harvest. I have had 40 out at it. I have English as well as Irish; more English than Irish. I get young lasses and young married women too that are able to work well.

6. *Mrs. Winter*, labourer's wife, Spital Hill.—I know the people who go out in Kenny's gang, and many of those who go out in other gangs. Girls and boys go as soon as they can earn 8*d.* a day. The lowest wage given is 8*d.* Sometimes, but very rarely, a little one goes for 6*d.* A woman gets 1*s.* When women go out separately to single turnips they get 1*s.* 6*d.* The ages of the children who go in the gangs would be 12 years or upwards. Most of them are girls of 14 to 17 years of age and married women or widows. Boys of 15 or 16 also go with them. My own boy has gone with them. He went to Withcall. The girls are mostly Irish; very few English girls go except those who have lost their characters. Girls that are on the street go. A girl of 14 years old would get 6*s.* a week pretty near all the year round. They are out now (November 20) picking twitch, gathering stones, and pulling ketlucks. They don't work just in the middle of harvest and in the winter, when the frost is on the ground. They often have to sleep in barns when they go long distances. Some will come back, and take victuals out for the others. I know they have stopped all night at Ruckland and at other places. When they go into the marsh they stop all night. At Withcall some will stop for weeks together. The gangers generally, if not always, take the work of the farmers. —— has made as much as 10*s.* and more than that in a day when he takes a large gang. They stop at Welton when they go there. I never heard of the children being ill-treated by the ganger. They don't always get their money. If they don't do their stint the ganger sends them home. There are several farmers who won't have a gang at all. I know that lots of farmers send their foremen in on horses to get as many hands as they want. When they can get them they send a man with them to look after them. I should not mind my children going to the farmers in this way, because there is not the same bad lot. Children under 12 years of age don't go, because they are not qualified to go long distances. I have lived 23 years here, and there have been gangs all that time. I think there are not so many go as used, because the farmers are getting tired of them. I think the farmers try more than they did to get the children themselves. Sometimes the farmer agrees to pay the ganger so much a day, and so much for each of his hands, and then the ganger does not pay all of them as much as he agreed with the farmer for. There are several labourers living here who work at Withcall. They could always get the hands if the farmer wished. There are several girls who go in the gangs whom the farmers would not have themselves. Parents like to keep girls from service, because they can earn money in the gang to support the rest. I don't know any English girls who have kept in the gang except bad girls.

7. *Mrs. Williams*, labourer's wife, Spital Hill.—My little girl, just 14 years old, went out with the gang to Buckland a fortnight back. They were pulling mangold wurzells. She worked three days. One night she stopped in the barn. She was seven miles from home. I don't know how many there were sleeping together. I have kept my girl at home weeks and weeks when she might have gone because they go so far that they can't get home at night. Cumming's gang mostly stops at Stennigate; they also stop at Coates Grange sometimes. They sleep in straw in the barn or stables. I never heard of any children being

taken in either by the farmers or the labourers. My little boy, just 13, was out the other day, when he did not get home till 11 at night. The gangers give the same wages as the farmers, but they make them work so much harder. They put them on so much. When they work under a farmer's man they are pushed as much sometimes. The farmer's men are as bad sometimes. I could have got my little girl out to service several times this last year if I could have set her up with a change of clothes. I should rather have girls not allowed to go out at all than have them allowed to go. It does 'em a deal of bad, and teaches them to swear and all sorts of bad things that they never learn of their parents.

8. *John Condroy*, labourer, Haswell Lane.—I have lived 20 years here. I used to go out with gangs five years ago. I never had more than six or seven with me. I used to go ketlucking at Withcall. I always took the work. When a ganger takes the work he is forced to work the children harder, or he can't make a day's wage for himself. I don't believe —— ever made 10*s.* a day. They only get 2*s.* 6*d.* a ton for picking stones. It has always been the custom here for farmers to employ gangers. When I worked at Withcall there were scores of other men besides me, each with 6 to 12 women and children, pulling ketlucks. They get 1*l.* an acre for pulling ketlucks. The same land will want ketlucking every year.—Not so much. I couldn't make 2*s.* a day when I worked.

9. *Mrs. Slight*, labourer's wife, James Street.—I have had seven children on my hands at once. I have only one girl at home now. She has been out lately a few weeks at Mr. Sowerby's at Withcall. She worked under an old man, the gamekeeper. He had only one hand. He had seven or eight under him. They were pulling ketlucks. She got 9*d.* a day. She is 13 years old. Kenny has asked for her. He will give her 1*s.* a day. I object to her going in the gang because there is so much badness and ill language going on. The old gamekeeper is a very good man, and he has so few under him that he can manage them. My little girl has been to school. I want her at home to nurse the baby. Some girls, but very few, go out to service at 10 years old. I don't think that the girls earn much for their parents by going in gangs unless they keep to it. Some parents like to keep them at home. It is putting them on to the streets I say. They have to work a deal harder when the work is taken, because the ganger has to earn money for himself.

10. *Elizabeth Slight*, daughter of last witness.—When I worked at Mr. Sowerby's there were eight with me. They were all older than me. All came from Louth. They were all girls. We got there at 8 o'clock, and left the field at 6 o'clock. We started from home at half-past 6 in the morning. Michael Regan was there at the same time; he had 20 with him.

11. *Michael Regan*, labourer and ganger, Union Court.—I go to Ruckland, Coatgrange, Donnington, Stennigate, Withcall. The other day a farmer at Bealsby wanted me to come there for a fortnight with 20 hands. He had a house prepared for us. That is 14 miles off. I wouldn't go. I go to Ormsby sometimes. There are a great many farmers who never have us; they have gangs of their own. Some have their own labourers' wives. Some get all their hands from Louth. I have been in the habit of going for the last 11 years. I can't get so much work now as I did. The farmers employ weeders more generally than they did, but there is not so much weeding to be done. Mr. Sowerby, of Withcall, tried to get his work done by four men with about 12 women and children to each. His men could not get the women. Children are no use till they are 12 or 13 years old. When I take out a gang of 20 there are not more than five girls under 14 in it. I didn't like to have little girls. They very seldom stop all night. I know ——'s gang did the other day at Ruckland. The foreman locked them up all night in the granary, and let them out in the morning. There are not many girls who are not married who go on from year to year in gang work. The parents try to force the little ones out sometimes; they say if I don't have the little ones they won't let me have the big ones. When farmers have their own gang they generally have about 10 or 12 under a man.

MARKET RASEN, pop. 2,563. 12. *William Hall*, labourer's son.—I am 15 years old next Christmas. I went out with Mr. Bartram a fortnight back about. I picked twitch one day and stones two days. There were 10 or 11 besides me, boys and girls. They all came from Rasen. There were no women. The girls were about as big as me. There were two little ones. I had two brothers with me, one 8 and the other 12. Mr. Bartram takes out women and children all times of the year, except when the snow is on the ground. In spring they hoe corn, spud thistles, and pull ketlucks. In summer time they go out pulling beans, singling turnips, hoeing cabbages. They take up mangolds and pick stones in November time. They only work on Mr. Angerstein's estate.

13. *Henry Hall*, labourer, father of last witness.—There are three large farms on which this gang is employed. They don't go to small farms. These are the only large farms near. They are in Wailsby, about three miles off. There is no other person who takes out gangs from here. Bartram takes stone picking but I don't know about the other work. My boy of, 15 gets 9*d.* a day, the boy of 8 gets 6*d.*, the boy of 12 gets 7*d.*

CAISTOR, pop. 2,141. 14. *James Harrison*, labourer, formerly gangmaster, Caistor.—I have been in the habit of taking out gangs from this town for several years. Gangs have been taken from Caistor for about 17 years. I have taken out gangs of about 16 persons, and sometimes as many as 30. There are two gangers now. Beginning in March we went out wheat hoeing. Women and children all hoed or stubbed. I used to work chiefly on one farm about four miles off. This farm was at Holton in the moor land, not on the wolds. The farm is 1000 acres. After hoeing we used to weed the growing corn. We also did the twitching on the fallows before turnips. After harvest we weeded and singled turnips and mangold. Then in the autumn we took up mangold and picked stones. We had better than half a year's work straight a head. My gang consisted mostly of little boys of 12 or 13 years of age. Farmers took boys for servants at 13 or 14, but not before 13. I have worked on other farms. I was always paid by the day. Farmers often let weeding, stubbing, and stone picking. Farmers who do not employ gangs let the work to labourers. It depends on the size of the farms whether they have a gang or not. Small farmers never employ gangs. Hoeing is commonly done by men, but gangs of boys and women sometimes hoe and cross-hoe turnips. Men are also employed to get up mangolds and swedes. Often a gang is at work on one side of a field and men on the other at this job. Weeding and stonepicking is not done by men. Gangs are cheap. Many large farmers have not enough labourers to do all their work. There is not much weeding to be done on the wolds. There is more weeding and twitching to be done on the moor.

I can speak the truth about gang work. If I had a bairn I would rather let it go on bread and water than work in a gang. There is always such low discourse going on among them. I took my bairns with me, but I looked after them and kept them by me. I never let them go with others; gang work is cheaper than other work; that is the reason why they are employed. Small farmers don't want them. They have, perhaps, two youths in their house, and a day labourer or so, and a day boy at 6*d.* or 8*d.* a day. These boys would do the light work as well as the other work, ploughing, &c. Some of the gangs go to Stainton, seven miles off. Girls and boys are mixed; that is the evil. Girls and boys ought not to be allowed to go together.

ROTHWELL, pop. 267. 15. *Mr. H. Skipworth*, farmer.—The wolds have been all under cultivation for about 50 years. The district has always been cultivated

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by large farms. In many cases the farms have been larger than they are now. I can speak for 20 years, during which I know that the gang system has been practised in this part. Gangs are perhaps employed more generally now than they were some years back. At all events, I find a greater difficulty in getting a gang now than I did. I do not employ gangs so much now as I did, simply for the reason that I cannot get them so much. The work for which gangs are most required about here is stubbing thistles and weeding in the growing corn, picking up couch grass or twitch, and gathering stones. The latter work is chiefly confined to the winter months. I have just had 50 tons of stones picked up in a fortnight by six children, boys and girls, and a man. The man took the work. They put the stones in heaps and I cart them off. I have not had a gang before since last winter, when I had one for the same work. I tried to get one in the summer from Caistor, about two and a half miles off, and could not. The consequence was that the thistles shed their seeds among the corn. As a rule, corn should be weeded about the end of May. It cannot be weeded after the middle of June, and sometimes in early seasons not so late as the beginning of June. Besides employing a common gang, when I can get it, I generally employ a few children out of my own parish, during the weeding season, under one of my own men, generally an old man. If we had no gang within reach we might make use of a greater number of the children of our own labourers who would otherwise attend school. The farms in the wolds range from 400 to 700 acres. Some farms are still larger. Most of the farms are worked by confined labourers and farm servants. There would be about six cottages belonging to a farm of 500 acres. Besides the confined labourers many farmers have farm servants or labourers lodging in the cottages. Farm servants are only used for attending the horses; they would never be employed for any other work; that is done by the gangs. I have no farm servants myself. I have men living in the parish who attend to my horses, to whom I pay 14*s.* 6*d.* a week all the year round. Confined labourers have their cottages rent free, and their pay amounts to about 14*s.* Day labourers have 2*s.* 3*d.* a day now. If we had not gangs we should have to employ adult labour for work that can be done as well or even better by children. The stonepicking is done for the sake of the roads, for mending which farmers are of course liable.

16. *Mr. S. P. Skipworth*, farmer.—I employ gangs from Caistor for weeding turnips, picking stones, stubbing thistles in grass land. I do not employ them for weeding wheat. I hoe my wheat. I do not use them for twitching. I do that by my own men. I use the chain harrows. I do not use a gang for getting up turnips. I let the stonepicking to the ganger; not weeding. The gang would usually consist of about 10 or 15 girls and boys, with two or three women. The boys are principally very small. There are no old men among them. The gang that I employ is employed by a large farmer near here during nearly the whole year. A farmer who employed a gang a good deal would have the same number of adult labourers in proportion to the size of his farm as other farmers. I should not say that the gang is ever used as a substitute for men. All the farmers about here employ gangs when they can get them. They can't always get them.

Thoresby, pop. 824. 17. *Mrs. Johnston*, mistress of National School.—At the present time there are not so many girls and boys in the parish between 9 and 15 years of age as there were a few years back. They used to go out then with James Borrell. Women used to go out more than now; they have got old. We can't keep boys in school beyond 11 or 12. At that age they are regularly employed all through the year. Boys of 9 go out occasionally in the summer. Girls don't go to work at all here until they go to service. Girls of 11 and 12 used to go out in the summer; they don't go now. There are not many of that age in the parish. The Croxby children never went out to work. Gangs come here regularly from Caistor. I have often met this gang. There are young girls and boys and older ones in that gang. Another gang of the same character comes from Binbrooke.

18. *James Borrell*, labourer.—I have lived 14 years in this parish, and worked 30 years for Mr. Davey. Some years back we always had a gang of our own. I used to go with them. I only worked with them on Mr. Davey's farm. They were all the wives and bairns of Mr. Davey's labourers. I have had as many as 18 to 22 with me, hoeing corn, weeding, hay making, harvesting, dragging turnips; then Mr. Davey never had a gang. Now there are not so many children. Now Mr. Davey has a gang from Caistor, because there not enough children here. The boys go to work at 9 or 10. The girls do not go out much, not out of our parish. Little girls come in the gang from Caistor. The women go hoeing turnips and weeding corn, but our women are getting old, and so many don't go as did. In the gang that comes from Caistor there are about 16 to 22 women and children. There are several young girls between 17 and 20 years of age among them. It is bad work for young girls, worse, far, than for children.

Binbrooke, pop. 1,335. 19. *Extracts from the return sent to the Commission by the Rev. John Thomas Huntley, rector of Binbrooke.*

(2.) Total number of persons employed in gangs from this parish in November 1865: 203.

(3.) Ages of persons employed:

	Male.	Female.
Under 7 - -	0	0
Between 7 and 13 -	39	42
Between 13 and 18 -	3	34
Over 18 - -	10	85
	Tot. males 42	Tot. femls. 161

(5.) These gangs work at distances varying from half a mile to five miles.

(6.) Hours of work, including time spent in going and returning.—From 7 a.m. to 5.15 min., 6.30 max.

(7.) Time allowed for meals.—A quarter of an hour at 10 a.m., and one hour at noon.

(9.) The sexes work together.

(10.) Influence of employment on physical condition.—Very prejudicial.

(11.) State of education.—Defective.

I am unwilling to make the returns required of me without recording my conviction of the evils inflicted upon parish where the gang system prevails: evils unmitigated and immeasureable in their results; subversive of the advantages of education, destructive of the social comfort of the peasant, and rendering abortive the blessings of Christian teaching and Christian precept.

The parish of Binbrooke furnishes, perhaps, as extensive an exhibit of the mischief emanating from is called "ganging" as may be found elsewhere upon the wolds of Lincolnshire. Binbrooke is encircled by other lordships and hamlets of comparatively spare population, where the habitations of the poor have been purposely few to avoid settlements under former poor laws; consequently these outlying districts draw largely upon the inhabitants of Binbrooke for agricultural labour, which explains the fact of having so many gangs issuing from my parish.

Sent out to work at so tender an age as 7, and ofttimes exposed to the inclemency of season, there must necessarily be a prejudicial result to the physical condition of the child. And although, when the field of labour is distant, children are sometimes conveyed thither in carts and waggons, still there is a strain upon bodily endurance unfavourable to the wholesome development of the constitution. It is difficult to ascertain what coercion or correction is exercised by the masters, though from their general character it may be inferred they have little compassion for those they employ. It is, however, justice to say there have been no cases of cruelty, or next to none, brought

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before the magistrate for redress, and I believe the wages to be remunerative.

Turning to the moral side of the picture, all is blank. The benefits of education, which charity has provided, are thrown aside by the parent. The young being occupied in manual labour from morn till night, the village school is comparatively denuded of scholars; so that if there be any instruction at all for the youthful mind, it is what may be gleaned on the Sunday. In room of moral and religious teaching, children are auditors of obscene and blasphemous language, whilst also exposed to the most profligate and debased examples; thus completing the first stage of ruin.

Progressing from childhood to womanhood, the girl is brought up without experience in the management of domestic affairs, and it is no wonder that, when the duties of servitude and marriage life are demanded of her, she is ignorant of both. Insensible to the sanctity of maiden delicacy through incidents of former days, the hapless female contends,—if contention there be, against temptation without ordinary help; and if, by what too often happens, she be forced into improvident marriage, or become a reproach to her friends, she exchanges her situation for one of penury and misfortune.

Such is the melancholy but faithful picture of peasant life where gangs exist! And here it may be asked: Why do not the leading members of the parish discountenence the system? How is it that they avail themselves of such service? The answer is palpable, and, I believe, necessitous.

There is not one extensive occupier of land, nor one sober-minded person throughout my parish, who does not denounce the gangs as destructive to the morals of the poor. But agriculturists are compelled, they say, to use such service or allow their land to be without profitable cultivation; for they cannot possibly compete in the labour market with the gangmasters. These men can make engagements for a long period of time, whereas a farmer has only employment for a few days; and were the parents to refuse the contracts of the former their children, instead of having many months of work secured, would have to seek a precarious service without being able to find it.

In dealing with this subject, I have confined myself to general observation; but facts are not wanting to justify my conclusions.

It is the legislature alone that can reform this wholesale corruption and abuse, degrading our fellow men and fellow Christians. The attainment of the object may be a problem of difficult solution consistently with the liberty of the subject; but if we be still left without remedial measures, our peasantry may be reduced to that state of degradation where remedy is unavailable.

JOHN THOMAS HUNTLEY,
Binbrooke, Rector of Binbrooke.
Nov. 25, 1865.

20. *Mr. James Phillips*, master of National School. —My attendance in the winter is about 90 altogether. In June the attendance falls to about 65. The greater part of the boys leave school altogether at 9 or 10 years of age for regular work.

21. *William Hill.*—I think I am going 12. I went with Mr. Fridlington's gang this year. Last year I went with Dickenson's. I went in the summer. I went to Bealsby (between three and four miles). There were about 20 with me. Some were smaller than me. There were no girls. There was only one girl and three women. All the rest were boys. We stubbed thistles and picked stones. I was working through harvest. After harvest I worked alone. In the winter I come to school. I can't read very well.

22.————————— It is a common thing in this parish for parents to send their girls into the fields instead of trying to get them places. There are plenty of girls who could get into service, but they get used to field work and like it better. They like having their liberty. They go out in the gangs as girls, and when they marry they still go out, and bring up their children in the same way.

23. *Thomas Dickenson*, labourer and ganger.—I have been in the habit of going out with gangs 30 years. I have worked on different farms, anywhere where we can reach. I go four miles sometimes. I have gone out with only four and I have taken as many as 45 with me. We took the largest number in the weeding time. There are six or seven men who go out with gangs from here. The gangs are never the same one day and another, hardly. The work we do is weeding, picking stones, stubbing thistles. We do not hoe turnips. Gangs pick twitch. Sometimes a gang is used for getting up mangolds or swede turnips, when they are heaped. There are not many women who go with us. Girls are no use till they are 11 or 12. Girls about that age who are out of service go. Sometimes little ones go with their elder sisters. I have been picking flint lately. I had four or five girls between 13 and 20. There are many girls in this place that can't get places. All girls that would be good servants can get places. All parents would rather have their girls get places if they could. There are some so poor here, with large families, they can't get their girls fit. They are obliged to have them go to work.

LUDFORD, pop. 800. 24. *The Rev. Warren B. Hastings*, incumbent.—I am well acquainted with the gang system as it prevails in this part of the wolds. There is no regular gang going out of this village, although the system seems to be gaining ground here. There are gangs which come into farms in my parish from Binbrooke. I think the prominent evil of the gang system is confined to the employment of girls at an early age. If girls were not employed in them at the ages of 8 to 14 they would never become at all connected with the species of labour, and would take more readily to domestic service than at present, and become more useful wives and mothers. Our population is about 800. Our average school attendance during three winter months, January, February, and March, was 78. The average attendance during the next three months was 68. There are about nine boys in school at the present time (November 15) over 10.

24A. *Extracts from the return sent to the Commission by the Rev. Warren B. Hastings.*

(1.) No organized gangs exist under a contractor for such labour; but on some farms there are mixed gangs of women, boys, and girls.

(3.) Ages of persons employed.—None under 9 years of age.

(4.) Hours of work.—Women and girls leave home about 7 a.m., so as to work from 8 a.m. to 6 p.m.

(6.) The sexes work together, and promiscuously in most cases.

(10.) Influence of employment on the physical condition.—It has no ill effect; rather the reverse.

13. The system as pursued on the farms in my parish loses one of its objectionable features, viz., the entrusting of a number of "lads and lasses" under 15 or 16 to some worthless contractor for children's labour. Those few farmers of any standing who employ the labour of women and children in gangs prefer to put them under the charge of one of their own steady and graver labourers. But where, as is the case sometimes, women of doubtful character, girls, boys, and *old men* work together, moral contamination is the inevitable result. On asking the best and most respectable mothers what they thought of the mixed system, no language could express their detestation. One person told me, *e. g.*, of an old man indecently assaulting, even before others, a young girl of between 15 and 16. And all testified to the foul language habitually used and applauded.

My own conviction is that girl-labour (except *with* parents) under 13 or 14 should be legally prohibited. It *leads* on to dissoluteness and averseness to domestic service. I do not think there exists any special reason for any interference with the labour of boys over 9 years of age that could be justified, except on the ground of loss of school instruction.

25. *Frank Heath,* labourer's son.—I am turned 11.

I have been in school since harvest. During harvest I made bands. Before that I was weeding in Mr. Fieldsen's land. There were six other boys with me. Michael Kenny looked over us. He was one of Mr. Fieldsen's men. He was not an old man. Some of the boys were older than me, only one smaller than me. We were working altogether about 8 weeks, weeding corn and stubbing thistles on grass land. We worked at the same farm all the time, till just a fortnight before harvest. I got 6*d.* a day; my brother got 10*d.* Kenny had a stick, and used it sometimes. We wanted it sometimes. There were six girls at work on Mr. ———'s land, which was the next farm to where we worked.

26. *Sarah Ann Thompson*, labourer's daughter.—I was 13 on the 14th of last June. I was at work this summer stubbing thistles and weeding corn. I was nine weeks on Mr. Child's farm at Wykeham. It is about two miles off. There were 10 of us sometimes and sometimes as many as 21. They were girls and boys from Ludford. There were some as young as 8. Mr. Giles Shepherd was over us all the time. He was a kind man. There were six boys sometimes much bigger than us, not much older. I got 9*d.* a day. This is the first year I have been out.

27. *Mr. Robert Allwood*, farmer.—I do not employ any common gang. I have once employed a gang from Binbrooke for picking ketlucks. My fields were in a bad way when I had them. I contracted with the ganger. A gang from Binbrooke is employed on the adjoining farm to me. My farm is not very large, and getting clean. We have about six boys all the year round. They are about 11 to 14 years of age. They work together at weeding and cleaning turnips. We make a point of keeping these boys all the year round. We should lose them if we did not find them constant work. We paid 1*l.* per acre to the ganger for picking ketlucks. It would have cost 30*s.* per acre to have it done by any other way. If a man was employed to do it he would want to make 2*s.* 3*d.* a day for himself and 1*s.* 2*d.* for his wife, while a ganger would bring nothing but cheap labour. We are well situated for labour. We are close to a populous village. There would not be boys enough for all farmers. If some farmers have a lot of boys others must have some girls or women. I think little girls might be dispensed with altogether. It spoils them for service. It is a very bad thing for girls to go into mixed gangs. Our labourers' wives are employed at picking stones in the winter.

28. *Mr. Richard Greenwood*, farmer, Tows House farm.—I never employ a common gang. I have been asked for work by one of the men from Binbrooke. Some of my labourers come from Binbrooke and some from Ludford. I employ the children of my own labourers who live on the farm, and I get some from Ludford. I should have them for weeding in the summer. I have a regular man of my own, a steady man of about 48, who always goes with them. He draws them on well. He would generally have about 10 to 15 women and girls. I should never want more than that. My farm is 1,000 acres. The fields range from 40 to 100 acres. One field, a grass field, is 120 acres. I have about five regular boys all the year round. I am nearer the town than other farmers, and can get children earlier than others. 10 of the children I have in the summer would be my own labourers' children, and the other five would come from Ludford. The common gang is very bad indeed. There is a reason for them when children can't be got otherwise, but I think that they could if they tried in many cases. A farmer can only let stonepicking to the ganger, or sometimes stubbing thistles. This work is let for 6*d.* or 1*s.* an acre, according to the quantity of thistles. For other work the farmer would pay the ganger by the day. He would bring the children and pay them. I don't think that work is done much cheaper by the gang. I think the gang system is full of evil. There are great girls and boys of 14 to 15 years of age among them, and there is always something wrong going on. It does not matter who the ganger is, when there are a lot together he has no control over them at all. I have counted 20 to 25 in the gangs that come from Binbrooke. The only advantage to the farmer from the regular gang system is that it saves him the trouble of seeking the children. It is a bad thing for girls to go to work in this way. Half the girls from Ludford have been ruined by going out. I think that farmers would not be at all losers by girls not going out to work at all. Farmers might have girls and boys separately. Some farmers have girls only and others boys. The conversation that goes on in gangs is dreadful, and the ganger only laughs at it. I farmed 750 acres at Biscathorpe, also on the wolds, and I got my work done then well without any common gang. I don't know of any gangs between this and Horncastle.

29. *Mr. Coulam*, farmer.—There are only two farmers in this parish, and we both find it very difficult to get the women out to work. I have to get my weeding done by men. We have a few boys. We must employ more men than when they get women and children to do the weeding. I get women and girls from Ludford. Briggs gets them for me. He is a Ludford man who occasionally works for me. I let him have a horse, and he brings them over. Ludford is four or five miles off. There are not gangs from Ludford, because it is not so much in the wolds as Binbrooke. The Ludford people are only wanted on this side.

Wold Newton, pop. 180, acreage 2,060. 30. *Extracts from the return sent to the Commissioners by Francis Walwyn Iles, Esq.*

(1.) There are two gangs employed in this parish, consisting of 15 or 16 persons, principally of women from Binbrooke. These are only employed during the summer.

(8.) The workers are well treated.

(10.) The employment is not prejudicial to their physical condition.

(11.) The children attend school about seven months in the year.

(12.) Their moral condition is decent.

(13.) I don't think much harm can come of it as conducted in this parish.

30a. Additional information communicated by F. W. Iles, Esq.

Re Gang System.

To Francis D. Longe, Esq., 45, Steep Hill,
Lincoln.

Wold Newton, Great Grimsby,
Sir, Nov. 25, 1865.

Men who have attained the age of threescore years and ten can remember the greater part of our district of the Lincolnshire wolds to have been mostly rabbit warren, covered with gorse, thistles, and coarse grasses. The farmers grew but little corn, and employed scarce any labour; and the population: following the law of supply and demand, was exceedingly sparse. Probably stimulated by the high price of corn during the "war times," the reclamation of these wilds was accomplished very rapidly, and the labour supply being insufficient, farmers adopted the plan of hiring unmarried men and lads, by the year, to board with them in their houses, the servants so hired being then, as now, almost exclusively employed in horse work. With improved cultivation the demand for manual labour increased, whilst the law of settlement deterred the landlord (generally sole proprietor of each parish) from building cottages to meet it. On the contrary, it was not unusual for them to be pulled down, with a view to getting rid of poor rates altogether.

Thus it came to pass that "open" parishes, such as Caistor, Louth, Binbrooke, and Ludford, always inclined to be over-populated, became centres from whence farms (nearly all large ones for many miles round, drew their extra, and in numerous instances their ordinary labour also.

The gang system seems to have sprung up naturally enough under these circumstances. The women and

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children were willing to work during the fine weather of summer, just when the corn required weeding, an operation which they could perform nearly as quickly and well, and therefore more cheaply, than an equal number of men, and at a time when the men on every farm were busily engaged preparing land for turnips. But, from some unknown cause, women don't get on with field work unless led and superintended by a man, and the man so employed, being made by the farmers responsible for the work being properly performed, received higher wages than an ordinary day-labourer, and getting to know the value of the work, would contract to do it at a certain sum per acre, he paying the hands; and by constant practice and good management he would then, as now, contrive to get much more work done per day by his gang than an inexperienced man could achieve. And this is, I think, the principal reason why gang work is cheaper than any other mode of employing women and children.

Why large farmers employ gangs more than small ones is, I fancy, that the gangers prefer the larger farms and fields, there being less loss of time to them at first in seeking for a sufficient quantity of work to last them through the summer months, *i.e.*, from May Day until harvest, and then when at work, in going from field to field, it being obvious that a losso f half an hour thus, in a day, is in a gang of 18 (not an unusual number) equal to one woman's work, that often repeated, would soon materially reduce the ganger's profits, and they generally calculate very closely.

Of late years, on estates like Lord Yarborough's, Mr. Angerstein's, and others, in the good management of which great pains have been taken, many more cottages have been built, and on some farms, where by long continued perseverance twitch has been all but eradicated, and other weeds reduced to a minimum, it is found quite possible to do without the aid of a gang; and as almost all admit the necessity for employing them to be an evil, it would appear not improbable, that as each parish becomes better supplied with labour within itself gangs will cease to exist.

At Binbrooke, resides a steam thrashing machine proprietor, who contracts with most of the farmers around to thrash their corn; he works three machines, employing about twelve men each, who go with them from farm to farm; and but for the wives and children of these men, gangs would be very difficult to get together, even there.

Caistor, Louth, Binbrooke, and Ludford are the only parishes I know of, from whence gangs go out.

I am, &c.

FRAS. WALWYN ILES.

WITHCALL, pop. 120, acreage, 2,500. 31. *Extracts from the returns sent to the Commission by J. Sowerby, Esq.*

(1.) Both common and private gangs are employed in Withcall; say, three gangs in spring and summer, none in winter.

(2.) The gangs consist each of 12 to 15; nearly all women and young girls.

(3.) Ages of persons employed on the 24th day of November, 1865:

Under 7 years of age -	none.
Between 7 and 13 - -	8 girls.
Between 13 and 18 - -	6 boys and 8 girls.
About 18 - - -	10 unmarried women. 10 married women.

(5.) The gangs come from Louth; about four miles.

(6.) Hours of work on the land.—From 8 a.m. to 6 p.m.; from assembling to getting home, from 7 a.m. to 7 p.m.

(7.) One hour allowed for meals.

(8.) The workers are treated well; but in three gangs there is only one which can be called a private gang.

(9.) The sexes work chiefly apart.

(10.) Influence of employment on the physical condition.—Good; as if they were not thus employed they would be idle.

(11.) Education.—Not good.

Moral condition.—Not good.

The advantages and disadvantages to the farmer of the common and private gangs are nearly equal. Common gangs are had recourse to because people are not to be got in the place to do the work. The regular number of adult labourers required for the cultivation of large farms might almost supply the necessary quantity of women and child labour; but the wives and daughters of labourers cannot be got out to work, and the boys get to service as soon as possible. The advantages and disadvantages to the mothers themselves betwixt the two sytems are about the same, except that the common gangs may prove a disadvantage morally.

THE CLIFF DISTRICT NORTH OF LINCOLN.

The Cliff District.

RISEHOLME, pop. ——, 32. *Mr. John Marshall.* farmer.—I have farmed 25 years in this country. Before that I had a large farm in Cambridgeshire near Wisbeach. My land there was all fen; it was not very strong land. I always employed gangs then. I farmed about 1,000 acres, and always had one or two gangs at work, consisting each of from 20 to 25 boys and girls. From March to July they would be employed at weeding, picking twitch, dibbling corn, setting potatoes, making hay, and at other work. During harvest the gangs would be broken up. The children would go with their fathers, or help other men, by making bands to tie their corn up. After harvest they would again be in the gangs picking twitch, getting up potatoes, dibbling wheat, &c. In my present farm, which is cliff land, I never have any gangs at work. I have had two or three girls helping to get up potatoes. When I lived about four miles from March I used to send over night to a ganger, and he would bring as many hands as I wanted. They had to come about four miles to my farm. They used to go six or seven miles to my father's land. These children used to gather on March bridge, 500 or 600 at a time, and then go off in all directions with their gangers. I have had 50 on my own farm for days and weeks together. We don't have them here because we don't want them. Their principal work was weeding; that could not be done in other way but by hand; it was imperfectly done even then. If a field grow much weed here it could not be cleared so well by our present system as it would be by a gang. I have paid 15*s.* to 17*s.* per acre in the fens for weeding alone. A field would not require weeding more than once. There is 20 times the quantity of twitch and weeds too in the fen land in Cambridgeshire to what there is here.

The class of farm labourers here are decidedly superior to those in the fens in point of intelligence and character. The mode in which they are employed here is certainly better for the children than going in gangs. They have no farm servants at all in the fens, I mean lads. The cottagers near the farms look after the horses. The girls are very immoral in that part of the country; whether it is to be attributed to gang system or not, their behaviour is shocking.

The gangs are not confined to children under 14. All the unmarried girls of 20 years and upwards go out with them. I think that so far as the farmers are concerned there would be no great loss if all girls were excluded until they were 18 or 20. They would feel an inconvenience at first, but there would be no serious objection. Machinery might be used more, and help them a good deal. The earnings these girls get are, of course, a great deal to poor families, but I don't know that they do not lose by it in the long run. The girls get demoralized, and they have no

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notion of keeping house. My labourers had, some of them, to come five or six miles to work in Cambridgeshire; there were no cottages for them nearer. They would live in the fens if there were cottages. Even about here labourers have to go two or three miles sometimes. Some of mine come from Nettleham, two or three miles off. Some of the labourers employed in Burton and Carlton have to come four or five miles.

WILLINGHAM CHERRY, pop. 173. 33. *The Rev. G. Rigg*, vicar.—I know that children some years ago used to be employed in the fields in small gangs. The clerk of the parish, who is now dead, used to go with them; they were only used occasionally. We have no day school. The population of my parish has been considerably increased lately. Two large estates have been sold in lots. The purchasers of some of the lots have built several houses for labourers. Previously the work was done principally by farm servants. Now the farmers keep fewer servants, and employ more day labourers. I think there was more hand labour required for clearing land formerly than now when agricultural machinery has been brought to such perfection.

34. *Mr. Richard East.*—I used to farm at Fiscarton, near here. I have retired about 5 years. Girls and boys work in the fields here, and always have worked in much the same way when there is work for them. I have seen as many as 20 at work in a field. Our old clerk used to go out with them. I think he had as many as 20 with him sometimes. The girls would be from 7 to 15 years of age. There would be as many girls as boys. I believe the same system goes on now, but I don't go about much. There is no day school in our parish. They run about here like little "heathens," as you might say. There is a Sunday school. They go to Sunday school. There are several girls of 12 to 15 years of age staying at home in the parish and doing nothing. It is their parents' fault. They have been picking potatoes lately. The girls do the same work at Fiscarton. They used to pick twitch and weed the corn in spring time. They generally had a man to look over them. I should say it is a deal better for the girls to go to service than stay at home after they are 12. They go into the fields, but they cannot make much. It brings them up in an idle way.

35. *Mr. J. Knowles*, farmer and overseer.—I sometimes employ four or five children, girls and boys. I seldom have girls. When I have girls and boys together I must send a man with them. I should only employ children in the summer time to weed corn or get up twitch. There is much more twitch in the fen land than in the cliff. Children are a deal cheaper to the farmer. I don't know that the work is done better by them than by men. I do not think there are any girls about 14 or 15 at home in our parish. In clearing a field of twitch I should first plough it up, then drag it, then harrow and roll it, then fork it with men. Women and children could not do this; at all events, men would do it better. Then I should drag it over again, and then have girls and boys to pick it over. Fen land would want to be cleared like this every fourth year. It is a common thing to let turnips to a man to weed and single at so much an acre, and the man would find a woman or child to single.

GREETWELL, pop. 69. 36. *Mr. Robert Hesseltine*, farmer, Greetwell Hall.—I farm 530 acres, of which 400 are under plough. I have farmed about three years here. I used to farm in the wolds between Brigg and Barton. The soil and system of cultivation is much the same in both places. We have fen land in both. There it was called carr. I know the fen land about Spalding. I do not think that there is any difference in the general character of the fen land there and that in other parts of the county. It may be, perhaps, rather stronger. At the present time I have no children at all under 12. I have three regular boys between 12 and 14. They are now (Oct. 10) working under the shepherd in the turnip field. In the spring and early summer these boys are employed weeding corn, singling turnips, picking twitch. When I first came I used to have a gang of about 14 or 15 children for weeding and twitching in the early summer time. I found them such a nuisance, and they took so much looking after, that I gave them up. They were girls and boys between 8 and 14. The girls got 8*d.* and the boys 6*d.* a day. It was easier to get girls than boys. There is no regular gangers about here. I employed one of my own labourers to look after them. There is a gang of about 14 now at work in Willingham.

37. *Mrs. Hesseltine.*—We have four farm servants about 18 and 24 years of age. They live in our foreman's house. It is very objectionable having these men in one's own house; it is so bad for the female servants. I think very few large farmers have them in their own houses now. It is very difficult to get good female servants. The girls are spoilt for service by working in the fields. On Lord Yarborough's estate the cottage tenants are not allowed to have their girls at home after they are about 14 or 15, unless they are sick. I think the women were better wives when they worked in the fields than they are now. They spend so much money in dress to the hawkers that go about.

FISCARTON, pop. 524. 38. *Mr. William Ashlyn*, overseer.—We have a population of about 500. There are about as many as 70 children at home between 6 and 14 years of age. They are employed in the fields at picking stones, twitching, &c. They work in numbers of from 10 to 20, or perhaps a few more. A farm labourer looks over them; he is generally an invalid man. He gets his usual wages. The children get from 4*d.* to 8*d.*, according to their size. Some begin as young as 8. They are employed on all the farms when they are wanted. On one large farm of 100 acres I have seen as many as 22 at work. They begin at 8 and give over about 5. If we had no children the work would have to be done by men and day boys. It would cost double as much.

SAXILBY, pop. 1,174. 39. *Mr. Martin Keyworth*, overseer.—The girls in our parish get into service at about 13 years of age, and the boys get out at about 12. Girls and boys are employed to pull twitch. A man goes with them to overlook them. I have had nine children myself lately gathering potatoes. I have seen 14 or 15 together. There would not be so many girls as boys at this work; the girls stop at home. They begin this work at about 10 years of age; a few would begin as early as 8 years of age. They only work in fine weather. I don't think a little work of this kind hurts them, but they may go on too long at it.

SCAMPTON, pop. 235. 40. *Mr. Sydney Mann*, overseer.—We have about 2,000 acres in our parish, and not enough labourers' cottages. Some of the men have to come three miles every day. All our farmers have day boys, but I never saw more than six girls at work together.

SCOTERN, pop. ——. 41. *Mr. Pinder Worth*, overseer.—Boys begin to work as day labourers at about 10 years of age, and then go out as farm servants. During the last two or three years I have seen a gang of weeders at work; but it is not the custom. Girls go out to service at 13. We have a good day school and the girls go there.

WELTON, pop. 692. 42. *Mr. George Dawson*, overseer.—We have about a score children in the parish, who are all employed at times. One of our farmers, who farms about 600 acres, has eight or ten boys all the year round. He always has a man with them when there are four or five together. Girls are employed with their fathers singling turnips.

NETTLEHAM, pop. 919. 43. *Mr. J. Wingard*, overseer.—In the early summer girls and boys between 8 and 14 are employed at weeding. I have seen seven or eight children, with a man to look over them, weeding corn or singling turnips. The man would be one of the farmer's regular labourers. There are not more than a score of children employed altogether in the parish. There are only two farmers who ever have any number.

Sudbrooke, pop. 74. 44. *Mr. B. Shuttington*, overseer.—We have only 74 persons in our parish. There are no girls or boys under 12 or 13 at work at all. A man has a boy to help him singling turnips. I never saw a lot of children working together. Our labourers come from other parishes not more than a mile or so off.

Reepham, pop. ——. 45. *Mr. C. Dawkins*, overseer.—We have a large population. There are as many as 70 or 80 children at Sunday school. There are plenty of girls between 8 and 14 who go to work in our parish; they only work in the summer time. They pick stones and twitch. About eight or 10 girls and boys go together. A man goes with them. I never saw more than a dozen working together. I don't think children were employed so much 20 years ago. They didn't farm so well then.

Aisthorpe, pop. 154. 46. *Mr. James Cunningham*, overseer.—Both girls and boys are employed in our parish at picking twitch, weeding, and gathering potatoes. They are at work from April to October. They generally work in sets of about a dozen, with a man to superintend them. This man is generally the foreman, or one of the farmer's labourers belonging to the farm on which they work. Children get 6*d.* a day. Girls and boys get the same wages when they are thus employed. The children are of about 11 to 14 years of age. No girls stay at this work after that age. They go to service.

Cold Hanworth, pop. 91. 47. *Mr. Simeon Musgrave*, overseer.—There are no girls who go out to work in our parish because there are none. Our population is about 100. I have a boy with me as farm servant who began to work as a day boy on the farm at something under 10 years of age. It is very common with farmers to bring up boys like this. We employ men and women to do the weeding and twitching. It costs more. Dunholme is a large village near us, and the boy and girls go out there under a man. I have seen as many as a dozen boys and girls at work together in the spring. They could not get more.

South Carlton, pop. 181. 48. *Mr. Edward Ross*, overseer.—We have only about 100 of population in our parish. I never saw a lot of children at work together with a man to look over them.

Broxholme, pop. 125. 49. *Mr. Charles Dawson*, overseer.—We have women to weed, twitch, and shake muck. I have seen a lot of children at work in the north of England. It is not our system here. I never saw it in our parish.

Brattleby, pop. 153. 50. *Mr. Thomas Robinson*, overseer.—In my parish the system of employing children, *i.e.*, girls and boys, in sets or gangs to weed or pick twitch, &c., does not prevail. The only girls I have seen working are girls between 8 and 14 working with their fathers. We have a good day school, and girls go there.

Hackthorne, pop. 234. 51. *Mr. Samuel Taylor*, overseer.—We have a population of about 180. There are about 25 children in the parish between 8 and 14. They are employed tenting cattle in the woods and lanes. They also help their parents to gather potatoes. I had four children working with my men getting up potatoes. It is not the custom with us to employ children with a man to look over them at twitching, &c. We have children to weed and single turnips. They would work with five or six men. I never saw more than half a dozen children in a field at once. They get 6*d.* and 8*d.* a day. The school is well looked after in our parish.

Gainsborough, Kirton, and Brigg Districts.

Harpswell, pop. 104. 52. *Mr. Nathaniel Belgate*, overseer.—We have both cliff and low land in our parish. In the winter time children are employed in the turnip fields; they are chiefly boys; very few girls are employed at all. Women work a good deal at getting up twitch. I have never heard of children going out to work in gangs.

Glentworth, pop. 340. 53. *Mr. Charles Dawben*.—Girls are employed in harvest to make bands for their fathers. The twitching is done by the farmer's own labourers. One of our farmers who farms about 900 acres employs seven or eight day boys of 8 to 12 years of age; they would pick twitch, single turnips, tend birds, &c. He would not have any other children. Girls go out to service at 11 years of age. Many farmers who have 11 or 12 acres of land have a little girl of 11 to help the wife. A girl can milk at 11. Many of them do. I should think there were a dozen girls of 11 or 12 in service with small farmers within four miles round here. They get their victuals and 1*l.* or 1*l.* 10*s.* for the year.

Heapham, pop. 129. 54. *Mr. Richard Platt*, overseer.—I don't suppose that we have half a dozen girls in the parish just now. I don't think any girls go out to work at all. We kill our twitch by letting the land lie fallow. The wives of the labourers help to weed the corn. There is no school in the parish, but the girls go to school in the neighbouring parishes.

Knathe, pop. 105. 55. *Mr. Richard Wright*.—We have had very few labourers' houses in our parish, but they are now building more. I have had 12 or 14 girls of about 8 to 13 years of age at work gathering potatoes. I got them from Marton. My foreman went with them. I used to have children for twitching, but now I use the chain harrows; they do as much work as 50 children. I don't want children at all now for twitching. The soil must be light and dry for the chain harrows.

Marton, pop. 487. 56. *Mr. Hind Auckland*, overseer.—Our soil is clay. The twitch can't be got by picking; we burn it. We do not do much weeding, except hoeing. I never saw a lot of girls and boys at work with a man to overlook them, not about here I mean. I have seen them on the way to Doncaster.

Stourton, pop. ——. 57. *Mr. John Hope*, schoolmaster and overseer.—In the spring time children go out to pick twitch at 6 or 7 years of age, and upwards; they go in lots of six or seven. I never heard them called "gangs." The farmer generally sends a man to look over them. Girls go out at 12 years of age to farm houses.

Upton, pop. 527. 58. *Mr. Thomas Jackson*, overseer.—We have very little twitch-picking about us. The land is strong and clayey, and the twitch is killed. In weeding corn in the spring time girls are employed at 10 to 12 years of age. I do not think any girls work in the fields over 14 or 15. The girls and boys go together, and sometimes with a man to mind them. Ten would be as many as one man would have to look after. Some get 6*d.*, and others get 8*d.* a day. They go from farm to farm as they are wanted.

Willingham-by-Stow, pop. 520. 59. *Mr. James Whittington*, overseer.—Children are sometimes employed in our parish at picking out twitch. Girls go to work in the fields for a year or two before they go to service. We should never use the expression "gang." A man has a lot of children at work sometimes; there are women among them and all. In the large farms there would be 12 or 13 together; in the small farms there would not be more than five or six. They get noisy sometimes. I never heard any harm of it. They are not employed in this way for more than a month or five weeks in the spring time; they are also employed at picking potatoes. There is no work for them in the winter time. Children get 8*d.* a day; labourers get 2*s.* and 2*s.* 3*d.* a day now.

Brampton, pop. —. 60. *Mr. Joseph Smith*, overseer.—There are five farmers in our parish. There is plenty of twitch. Gangs are employed to get out the twitch. I have never seen any children out with them.

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Corringham, pop. 717. 61. *Mr. John Cook*, schoolmaster and overseer.—Children are employed in gangs in our parish. I have seen upwards of a dozen at work gathering twitch, or getting up potatoes, or weeding corn. Girls as well as boys of 11 years old and upwards are employed. We have a school in the parish for females. The children all go to school in the winter. From June or May they go to work to the close of the potatoe season. Children get 1*s.* a day for weeding, and 1*s.* 3*d.* for gathering potatoes. Girls of 11 get this sometimes if they can keep up with other hands.

Pilham, pop. 89. 62. *Mr. John Harrison*, overseer.—We have only three labourers' cottages in the parish. Children are not employed in the fields. Our land is heavy. Boys are employed singling turnips, but girls are not used.

Springthorpe, pop. 260. 63. *Mr. John Whitehouse*, overseer.—There are plenty of labourers in our parish. Some of the farmers employ a lot of women. I do not know the expression "gang." Our soil is heavy. We don't use the chain harrows. Girls and boys both go to service at about 11 or 12. Boys begin to plough at 12. Girls of 12 milk. It is a regular thing for girls of 14 to milk. We have four or five boys tenting cattle in the roads of 11 or 12 years of age; one of them is only 10. Tenting cattle is bad work for boys. The parish lets the right of pasturing in the highways at 8*l.* or 9*l.* for the year. The occupation ways are also let at 4*l.*

Willoughton, pop. 620. 64. *Mr. Nicholson*, farmer.—We employ children to weed in the spring under one of our own labourers; he is generally an old steady man. The children are hurt by the mixture of older boys with them. There are one or two farmers in our parish who adopt the system of employing a dozen boys or so, including big boys who have left school. Corn ought to be weeded when it is about a foot high. It can't be done when the corn gets high without injury.

Mr. John Willey, wheelwright and overseer.—65. Girls and boys go out to work in the fields. In the spring time girls and boys go out in gangs to weed; one of the farmer's men go with them to overlook them. Girls do not go out much; they get into service about 13. There are very few girls at home in our parish of 14 years of age.

Snitterby, pop. 286. 66. *Mr. Preston Bee*, farmer.—Girls are very little used in the fields with us; they only go out to get up potatoes. Elderly women go out stonepicking; they take it by the load. We pay 1*s.* a load for picking the stones up, and the parish gives the same sum for it for the roads.

Bishop Norton, pop. 459. 67. *Mr. Robert Bellwood*, farmer and overseer.—We have only about 300 population. There are hardly any children in the parish. We cannot get more than three or four. The girls don't work but very little. The boys begin about 9 years of age; they work at singling turnips; men hoe, and a boy or girl follows. We don't have children to pick up twitch; men and women rake it up. We use the chain harrows.

Waddingham, pop. 812. 68. *Mr. Robert Anderson*, farmer and overseer.—Boys go out to work with us as soon as they are able; girls go hardly at all. Just in the weeding time they are employed. About 10 girls and boys will go in a gang. The farmer will employ one of his labourers to go and look over them. The farmer would pay the children. We have nothing of the letting system about us.

Blyborough, pop. 209. 69. *Mr. Francis Barret*, farmer and overseer.—Ours is a small parish; the population is under 300. There are about 30 children in our day school. Farmers have day boys, little boys at 6*d.* or 8*d.* a day. There are hardly any girls employed in the fields, except at harvest time. Three of our larger farmers have sets of boys and girls to weed in the spring time. The farmer sends a man to overlook them. There may be as many as a score boys and girls, and women, altogether. They would only be employed for three weeks or a month in the summer. Girls would go out to service at 10 or 12 years of age.

Hemswell, pop. 465. 70. *Mr. William Vicars*, farmer and overseer.—We have no very large farms, not so large as in the wolds. I have always two or three women to weed in the summer. The girls between 8 and 13 would be at school. Farmers have girls of 13 and 14 years of age as servants. Boys are taken at the same age. Our soil is clayey. We kill the twitch by letting the land lie fallow. There are very few potatoes grown in our parish.

71. *Mr. Robert Carlisle*, schoolmaster.—I can keep labourers' children at school to 10 or even 11 years of age, both boys and girls. Up to that age they come pretty regularly, except at harvest time. I do not think any girls go into the fields at all; the boys go with their fathers sometimes. I have been 16 years in the parish. There never was much working girls or little boys. Labourers get 2*s.* 3*d.* a day; boys get 6*d.* to 1*s.* I don't think that children are worked much in any of the neighbouring parishes. Boys are employed to tent birds in corn fields when the wheat has been sown late; if it is sown before Martinmas it will get up before the birds get it.

Kirton, pop. 2,058. 72. *Mr. W. E. Howlet*, solicitor.—The neighbouring parishes to this town have hitherto been what are called close parishes, very thinly supplied with labourers' cottages. Many of the labourers employed in these parishes reside in Kirton, and go out as many as five miles every day to work. Children, principally boys, go out in small gangs of 8 or 10 stone picking. Girls go out very little. Women are very little employed in the fields either. Men are getting 12*s.* a week now. There are generally men out of work in Kirton.

73. *Mr. Robert Askew*, master of the grammar school.—There are several gangs taken out of this parish. There are several men living in the place who hire the children and take them out. They take work by the acre, weeding, picking stones, or other work. They begin in the early spring. As many as 20 go out together. They are generally not so many as that. I don't often see any women with them. Children go at 8 years of age. There are very few girls among them.

Manton, pop. 281. 74. *Mr. Benjamin Ludwin*, farmer and overseer.—Boys begin to work at about 10 with us; girls not before 12. Girls would go into service at about 14. In the spring girls would be used a little. There might be about 10 or 11 girls and boys, and women, employed at weeding. The hours of women and children are from 8 to 5. Men's hours are from 6 to 6. Men get 2*s.* 3*d.* a day; women, 1*s.*; children, 6*d.* to 8*d.*

Appleby, pop. 579. 75. *Mr. Thomas Yolland*, farmer and overseer.—We have about 600 population. All the children are at school. Not a girl between 8 and 13 is employed in the fields. Our soil is heavy.

Broughton, pop. 1,280. 76. *Mr. John Barton*, shopkeeper and overseer.—Our parish is very large, over 7,000 acres. The population is about 1,300. Some of our farmers farm 1,000 acres. Children are employed to pick twitch and potatoes. No children are employed under 10 or 11. Scarcely any girls are employed.

Bigby, pop. 249. 77. *Mr. William Reynolds*, farmer and overseer.—Children under 13 are employed in our parish to weed and single turnips. On a farm of 500 acres there would be 10 or 20 girls and boys employed at this work; they would also be employed at twitching in the spring, and weeding in the early summer. I have seen from 20 to 30 twitching and weeding, the children at 6*d.* a day or 8*d.*

Wrawby, pop. 2,961. 78. *Mr. John Munday*, farmer and overseer.—We do not employ girls in gangs to weed and pull twitch in our parish. Boys are used. I don't know that I ever saw girls in the fields. I am not an advocate for employing females on the farm. We have a good school, and it is well attended.

Elsham, pop. 409. 79. *Mr. John Blay*, schoolmaster and overseer.—No girls at all go out to work

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in our parish, except for pulling potatoes. Boys go out tenting. I can keep boys in my school till they are 11. They go out to work and come back. Boys go to service at about 13 or 14 years of age.

Worlabye, pop. 526. 80. *Mr. George Duffell*, shopkeeper and overseer.—In our parish the biggest part of the children go out to work as soon as they are able. They go at 8 years of age. In the summer time a man goes with seven or eight; girls and boys go together. Each farmer sends one of his own men with them; they get 6*d.* and 8*d.*; they go to work about 8 in the morning, and get home about 6. We have a very moderate school indeed. No National school. The man depends on what he can get from the parents; he told me the other day that he had only got 1*s.* 10*d.* during the last fortnight. The potato season is a bad one for school. There are a great many young children in our parish at this time.

Melton Ross, pop. 168. 81. *Mr. John West*, wheelwright.—I have seen five or six children weeding with a man to look over them. I never saw nearly so many as 20. Girls get to service at 12 or 13.

Kirmington, pop. 405. 82. *Mr. William John Frankish*, farmer.—There is nothing of the gang system about us. I have heard of it at Temple Bruer, the other side of Lincoln. We don't require the children here. The land does not grow weeds. The girls go to school till about 11 or 12, and then they go to service.

Scawby, pop. 1,570. 83. *Mr. Richard Truman.*—I have seen a gang of 5 to 10 children working together in the farm near me. I never saw more. I generally see an Irishman as ganger. He is a labourer commonly employed by the farmer on whose land the gang work. He lodges in Brigg, and gets the children from here. The farmer pays the children and the man too. The gang works at weeding and singling turnips. I never saw girls in the gang. Sometimes a labouring man will have his girl to help him to single turnips, but it is not common.

Cadney, pop. 570. 84. *Mr. John Gibbons*, farmer and overseer.—No children go out at all to work with us before they are 13. Boys and girls both go to school to that age. There are several small cottagers in our parish. The parents are well off, and don't want to send them to work. Labourers got 2*s.* 6*d.* a day. Now their wages have been reduced to 2*s.* 3*d.*

The Carr District and Isle of Axholme.

Carr District
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East Stockwith, pop. 378. 85. *The Rev. W. T. Humphrey*, incumbent.—The farms in my parish are all small; the largest is 200 acres; most are under 100 acres. The fields are also small. Children and women are employed very largely, particular in setting, gathering, and sorting potatoes in the pie. This goes on during the winter. None of our people go to other parishes; we are too scarce. We import hands occasionally from neighbouring parishes. We have no regular gangers. Girls are employed from the ages of 7 or 8 up to late in their teens. There are several young girls in our parish who stay at home and work in the fields instead of going into service. I consider that this habit has a bad moral effect upon them. There is always bad talk going on among them when at work; the effect is that the girls have their moral sense blunted, and thus they are rendered more liable to fall. From May to November the school is very ill attended through their field work. The girls almost universally go out in our parish; they go out with their mothers or neighbours, and are hired by the farmers. The farmers grow wheat and potatoes in succession here from year to year.

85a. *Extracts from the returns sent to the Commission by the Rev. W. T. Humphrey.*

What are usually understood by the term "gangs" are not employed. The wives and children of farm labourers are often employed in field work, and sometimes a good many together, hired by the farmer who needs them. About 81 persons are so employed, exclusive of the cottage farmers and their families.

Of these, there are 15 boys and 18 girls between 7 and 13 years of age.

(11.) State of education.—Many are readers, but writing is not very common. There has been a national school of late years only.

(12.) Moral condition.—Much as in other villages; not a very high standard of purity.

(13.) As observed above, the gang system here can only in a very modified sense be said to exist. The land in this parish, and mostly along the banks of the Trent downwards, being what is called "warp land," *i.e.* artificially clothed with alluvium, is of a very rich nature, and bears as its usual rotation of crops, potatoes and wheat, other cereals being only very rarely interimxed, and turnips very scarce. Hence the cultivation is more like an enlarged garden work, and needs the labour of many hands in proportion. Men perform the heavier work, such as ploughing, carting, &c.; but there is a great deal of work, such as planting or gathering potatoes, in which men's labour would be reckoned as wasted, and, indeed, sufficient men could not be obtained; hence the demand for the assistance of women and children, the latter being found of use, even as early as 8 years of age in some work.

Mothers take their children with them into the fields, and, being all near neighbours, a good deal of local gossip gets canvassed; and it is said there is a good deal of loose talk. This is, I think, particularly the case when working at the sorting of potatoes in the heaps or pies, and in delivery; for then all are seated within speaking distance. In the other cases, they are more scattered over the fields.

Field-work has the tendency to keep the young girls who are brought up to it from going into household service, as they earn enough by a few months labour to keep them, and they have thus more freedom. Such is the demand for women's labour in this way that, at most times of the year, it is most difficult to obtain charwomen or nurses for the sick.

The effect upon the school is, that from May to October or November, it is reduced in numbers to about half, the half being chiefly those under age at which to work. During the winter, half the school revives again, thus inducing a sort of half-time system on an extended plan; but what is learnt one winter session is very imperfectly remembered after the field-work is over.

Men's wages are from 2*s.* to 2*s.* 3*d.*; Women's, 1*s.* to 1*s.* 3*d.*; Children's, 7*d.* to 1*s.*

86. *Mrs. M. Wagstaff*, labourer's wife.—Girls and boys go out "wicking" (twitching) after the plough in March. Then they are employed setting potatoes, then at weeding potatoes, then at weeding corn. In harvest they are employed to make bands. After harvest they are all out gathering potatoes. Then in the winter some are employed at sorting potatoes. Women principally do this. Women hoe. The girls who work are from 8 to 15 years of age. The youngest are employed at making bands and gathering potatoes. I have never let my girl go out except to make bands for her father. I wish her to go to service. A poor person with a large family could always get his girls into service at 10 or 11 years of age, if he was obliged to part with them then; they could get places with farmers. There are many girls in this parish kept at home by their parents for the work they get during the summer. I don't think there is any question at all about the evil of sending girls into the fields; they are sure to hear bad language; it is horrible the talk that goes on. Field work, too, spoils them for house work; they can't take to it. The most children are wanted for making bands in harvest and gathering potatoes. When a potato gathering is going on on a large farm the foreman will come round, and gather together about 14 or so people, girls and boys and women.

87. *Mrs. Danby*, labourer's wife.—There is little or no work for girls here except at potato gathering time and for making bands. Girls of 9 to 12 would get work of this kind for about two months, during

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September, October, and November; they would never get more than 7*d.* a day the little ones, or 1*s.* a day the big ones. There is plenty of work for women all the year round.

88. *Mr. William Laynes*, farmer and overseer.—Girls and boys from 8 years old and upwards are employed in this neighbourhood at setting potatoes, pulling flax, picking twitch, gathering potatoes, &c. We should have a set of hands for weeding, consisting of women, boys, and girls. Girls and boys under 11 are paid as half hands. The young ones work the same hours as the others; they go out at 7.30, and leave off at 5.30.

In case of large farms the foreman would look over them. In small farms the farmer himself would go with them. Boys and women get 1*s.* a day, or 13*d.* when gathering potatoes. The half hands would get 6*d.* Our labourers' cottages are distributed all over the parish. The farms are small in our neighbourhood; there are only a few farms of 200 acres; none over. I have myself looked over a lot of women and children of 30 to 40. The women among them are sometimes bad. The old people talk badly to each other, and do bad to the young. There is a good deal of land lying round our parish where labour is wanted. Almost all the land in the parish is owned by small freeholders. The potatoes give a deal of labour; they want turning over all the winter. In the spring the land wants clearing, and the women and children are employed at setting potatoes and shaking manure.

East Ferry, pop. ——. 89. *Mr. Thomas Butler*, overseer.—Children are employed at picking potatoes in our parish. Sometimes as many as a score will be at work together with a man to look over them. They begin at 7 or 8 years of age; they get half-day's wages at first.

Scotter, pop. 1,167. 90. *Mr. William Sizer*, farmer and overseer.—Ours is a large parish, but we have no large farms. There is only one farm of between 200 and 300 acres. Children go out to work at 10 years of age; they go potato picking principally. A good many potatoes are grown in the parish. They go with their mothers. Children are not much used for weeding; women weed. The children are more trouble than they are worth. Wages are 13*s.* 6*d.* a week; that is the highest wage. Our parish runs down to the Trent.

Isle of Axholme.

Isle of Axholme.

Garthorpe, pop. ——. 91. *Mr. John Kelsey*, overseer.—We have a population of between 500 and 600. Women and girls and boys are employed at weeding. The farmer generally sends his foreman with them. There are sometimes as many as 20 working together; this would be the outside. The girls would begin at 8 or 9 years of age; they would get the same wages as the elder ones if they can keep up with them, that is at gathering potatoes. At weeding the women have 10*d.*, and the girls and little boys get 6*d.* Very few girls work at this after they are 12 or 13 years of age. The girls all go to service at that age. There are some girls who have been out and have returned home; they like being at home and working in the fields better than being in service; some may have lost their characters, but not all by any means. The potatoes give plenty of work all the winter, and in the spring the children and women are again wanted to plant them. Women and children are also employed a good deal in gathering the flax.

Luddington, pop. 1,264. 92. *Mr. Enock Pygott*, overseer.—There are about 700 in our parish; they mostly live in the village. There are very few English girls above 14 years of age living at home. The Irish girls stay more than the English. It is a bad thing for the girls going to work in the field; they go out to work in droves at this time of the year; along the lanes, I mean; they don't work in what you call gangs. The married women all go with them. There would be whole families at work together. I have known as many as 40 together potato picking in large farms; they go out to work in companies all the year round, but they are not so large in the spring as in this time, when they are gathering the potatoes.

Owston, pop. 1,613. 93. *Mr. J. Stevenson*, overseer.—Ours is a large parish, containing nearly 5,000 acres. There are a great many small freeholders. We have 150 voters, nearly all freeholders; several of them own from 8 to 10 acres; they work themselves, and employ their children. We have two large farms of 400 acres. I have seen from 12 to 15 or more girls and boys weeding together. Girls go out to work at about 8, and work till they go out to service, at 13 or 14 years of age; very few stay at home except those in the factories. I think the children are hurt by going out. Their mothers are generally with them. As a general rule our population is sober.

Amcotts, pop. 374. 94. *Mr. Thomas Batty*, overseer.—The system of cultivation is much the same through the whole isle. The principal crops grown are wheat, potatoes, beans, oats, turnips. There are very few farms over 200 acres. Many very small holdings. Several of the cottagers have an acre and half of land. Girls of 7 or 8 years of age and little boys are used to gather potatoes. Boys of 8 years of age someitmes drive carts on the farms; they are not allowed to do so on the roads now. The wages of men are 2*s.* and 2*s.* 6*d.* In Althorpe, where the railroad is being made, wages have got up to 3*s.* Women get 1*s.* 3*d.* a day at potato gathering. Girls of 8 or 9 get half wages; girls of that age set potatoes, and weed corn and potatoes at the spring time; they hoe potatoes with forks; they have their own forks. There is not much work let out here except harvest.

Belton, pop. 1,871. 95. *Mr. Thomas Burtwhistle*, overseer and schoolmaster.—Our parish is large. Children go out to weed during May and June. I have seen from 12 to 20 women and children together weeding under a foreman. The girls get 6*d.*; their mothers get 1*s.* a day; they begin to work at about 7.30, and give over at 5; they weed corn, single turnips, shake manure; they begin in the spring, and go on to harvest. Potato gathering goes on to the end of November; then they are employed turning over the potatoes in the heaps. We have six or seven day schools in the parish. Our population is 1,871. All the children go to school till they are 12. I have 40 in my school. Another school has 60 children; there are five or six women's schools besides. I keep some labourers' children in my school till they are 14 years old. The children are not at school all the year.

Easttoft, pop. 500. 96. *Mr. Thomas Bartlett*, farmer and overseer.—We have a population of about 500. In the spring I can get children of 7 years of age and upwards and women for weeding. There is not much work let out with us except harvest work. I have seen as many as 40 women and girls together working in large farms; men would be working with them, hoeing; the women and girls would be weeding; the bailiff or foreman would be with them. I never heard of any harm coming of it. A child of 10 years old can get 1*s.* 6*d.* a day at picking potatoes. We have 150 Irish in our parish; they work very well. I think most of the girls in our parish go out to service at 12 or 13 years of age. The land about us lets for 2 guineas to 50*s.* per acre; some that is let in small lots of two or three acres fetches as much as four or five guineas per annum.

Epworth, pop. 2,097. 97. *Mr. J. R. Pearson*, schoolmaster and overseer.—We have a population of more than 2,000. There are two day schools for boys, my own school and the National school. During harvest and after harvest up to Martinmas the children are in the fields; they begin to work at potato picking at 6 years of age, or even younger. I have about 10 to 12 labourers' children (boys) in my school up to March. Girls go into service at 9 or 10 years of age. The potato getting is let by the hour. Weeding is not let.

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CROWLE, pop. 2,647. 98. *Extracts from the returns sent to the Commission by the Rev. W. Duncombe, of Crowle.*

(1.) A system of employing persons in gangs exists in this parihs. They are employed in gathering potatoes and flax.

(2.) Aggregate number of persons so employed; say 1600.

(3.) Range of ages, from 8 to 40.

(4.) They are employed nearly all the year round.

(9.) The sexes work sometimes together, sometimes apart.

(10.) Influence of employment on the physical condition.—Very healthy.

(11.) State of education.—Bad.

(12.) Moral condition.—Bad.

The Heath and adjoining Parishes.

THE HEATH AND ADJOINING PARISHES SOUTH OF LINCOLN.

BLANKNEY, pop. 560. 99. *Mr. P. Chapman*, master of the National school.—I have been here two years next Christmas. I am a native of Skellingthorpe. I have not seen much of the employment of children in what are called gangs. The most I have met with was last Christmas, when a great number of children, nine or ten from the parish, several from Metheringham, and several from Kirkby Green were employed planting young trees on Mr. Chaplin's land. They were employed at this for about two months. We have about 20 boys attending the school now. The largest number I have had was 53. That was last winter just before the planting work began. I should think the boys are picking potatoes now. Several of the parents of the children who attend this school are small cottagers who employ their own children on their own land. I expect our number to increase to February, and then in March they will begin to fall off. On the 3rd of April this year we had 28 boys; at the beginning of February we had 34 in attendance.

100. *Joseph Smith*, labourer's son.—I am 10 years old. I don't know when my birthday is. I come from Scopwith. I have been attending school on and off for two years. Since harvest I have been out working. I have been picking stones. There were five other boys with me. There were no girls. Edward Jackling went with us. He was the "ganger." I mean by that the man who goes out with boys. He used to have some girls with him. He had girls with him before harvest. I don't know why he has none now. Before harvest we were weeding corn, mangold, and carrots. I went with him all the time. There were 13 with him then; there were nine girls and four boys. There were no women with us. Some of the girls were younger than me. I worked from the 22nd May to harvest. Sometimes there were more than 13. There were 16 at one time. We worked on Mr. Clarke's land all the time. Edward Jackling was one of Mr. Clarke's men. The foreman paid us. We were hit sometimes when we were idle. I should not mind going to work again. It was good fun. I think some of the boys were 15 or 16. We began at 6 and gave over at 6. Mr. Clarke's farm was about a mile from my house. Edward Jackling came home with us sometimes, not regularly. I was at school all the winter.

(Can read.) 6 times 7 are ——; 4 times 5 are 20; 3 times 8 are 18 (after reconsideration) 24. The name of this county is ——. I live in Scopwith. The sea is (after hesitation) wet.

101. *John Collingshall*, labourer's son.—I am 11. I have been to school five weeks since harvest. I have not worked at all since harvest. I was not at work in the spring. I have worked at weeding. I was weeding on Mr. Byron's farm the summer before last. I was a day boy there for three years before I came here to school. I turned badly; that is why I come to school. There were five other boys with me. In the winter I cleaned turnips. I went to weed when I first went.

(Can read.) 6 times 3 are ——; 3 times 6 are 18. There are five sixpences in half a crown. I got 7*d*. a day. I had been to school before I went to work. (Does not know name of the county. Does not know the Queen's name.)

102. *George Mackinder*, labourer's son.—I am 10. I have been five years at school. I have never been at work. Father is a shepherd. I have four brothers and two sisters. Only one younger than me.

(Does not know the name of the county.) The sea is water. (Does not know what an island is. Spells "parish.") I don't know what a whale is. Bacon is made from a pig. (Does not know what his worsted "comfortable" is made of.) Worsted comes from Africa. 4 times 6 are 24.

METHERINGHAM, pop. 1,532. 103. *Mr. Walter Alexander*, master of the Church National School. —There are more than 1,500 in this parish. About 1,000 live in the village. A large part of the parish is fen land, and a large part lies up on what is called the heath. There is a large Wesleyan school in the village besides ours. Our attendance begins to fall off about April. In the early summer the children go weeding and twitching. After harvest they go potato picking. Our boys' school attendance was 66 in the winter. It is as full now. It dropped to between 30 or 40 in the spring. Our boys' school was only opened last Christmas. The Wesleyan school had all the children before that. The girls go out weeding as much as the boys. There are three or four men who take out the children. They take work of the farmer, and employ the children to do it.

104. *Emma Kirk*, labourer's daughter.—I am 13. I went out weeding just before cleaning time last summer, that is, at the beginning of April. I went with Mr. Newton. Mr. Newton is a coal-haulier. I worked down in the fen land, on Mr. Green's farm. There were 10 with me. I only worked a week there. I did not work any more last summer. Mr. Newton paid us. I got 9*d*. a day. I began at 7 and left off at 5. I went two or three miles to work. I left home at 7. I never went to work before.

105. *Ellen Collishaw*, labourer's daughter.—I am going 13. I have worked at weeding. I worked all the year to gleaning time (harvest). I have been working since harvest too. I have been singling turnips and cleaning turnips. When I went weeding I went with Mr. Hutchinson. He is a labourer. I was all the time with him. There were 20 besides me, girls as well as boys. There were many girls younger than me. Sarah Flatters was one (see witness 107). There were none smaller than her. John Green was the smallest boy. He was going 10. We worked on Mr. Greenham's on the heath. We weeded wheat and barley. We picked up twitch after harvest. The corn was high when we weeded it. We used to get wet. Our dresses got wet as well as our feet. We got them dry by next morning. We got home about 6. We left the field at 5. When we got home we washed and changed our clothes. I never caught cold. Mary Anne Hatton was the eldest girl with us; she was going 15. Elizabeth Hewson was over 14; she got 8*d*. a day. Mary Higgins was with us; she is a woman. There were no big boys with us. I have also been out with Mr. Scholefield. He hauls coals at times. (Does not know the name of the county, nor the Queen's name.)

106. *Mary Anne Hays*, labourer's daughter.—I went with Mr. Scholefield this last spring. I was only three days with him. Mr. Scholefield had the girls, and Mr. Newton took the boys. There were only two little boys with us. There were about nine girls. I got 7*d*. a day. (Reads imperfectly. Spells gown, goun; shawl, shaul; railroad, railroade; horse, hors.)

107. *Sarah Flatters*.—I was 10 last harvest. I went out with Mr. Hunter. He takes out girls and boys together. He had eight sometimes. Mr. Hunter works on the roads when he is not with the children. He is an old man. I don't know when I went out. (Cannot read.) I have been at school many years. I went to work last year for the first time.

108. *Mary Anne Spikes*, labourer's daughter.—I

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was eight last Sunday. I went out to work last year. I went with Mr. Newton. I was a month with him. I singled turnips. I have been at school a long time. I never went out to work before last year. I was more than a month at work this year. I worked up to harvest. I only singled turnips. I got 6*d.* a day. I never got wet through from rain. I went to a farm on the heath, two miles off. (Cannot read nor spell.)

109. *Mary Anne Reynolds*, labourer's daughter.—I turned 10 last March. I have worked two summers with Mr. Woodcock. He works for Mr. Fox. I worked on other farms besides Mr. Fox's. I also worked with Mr. Newton. Girls and boys were mixed with Mr. Woodcock. There were 20 of us once, and 13 at another time. I singled turnips, weeded wheat and barley and swedes. I never picked twitch. I have worked on the fen as well as on the heath. I have gone as far as London Ramper, that is, four miles from my home. I was weeding wheat then. I started at 7. I left at half-past 5. I did that every day for a week. I was tired of walking. My feet were not sore. The wheat was high. We got wet. I got 8*d.* a day. There were some boys from Dunston younger than me. Frederick Kirk was about 6. Mr. Woodcock came with us as far as Dunston. He lives at Dunston. We came home by ourselves. There were two girls of 14 with us; they were the eldest. There were no boys so old. (Can read well.) I was at school ever since I was 2 years old. I always come to school when I don't go to work. I got 4*s.* a week from April to harvest, and a little bit after harvest. I used to read of an evening after my work. I was tired. I have four brothers; no sisters. Two are at school. One goes to work regularly. He is over 13. One is not 2 years old yet. Father has worked 13 years at Mr. Chaplin's; a regular labourer. (A very intelligent girl.)

110. *Smith Cooling*, labourer's son.—I am turned 10. I worked last year, not the year before. I worked with Mr. Woodcock and Mr. Newton. I began to work when weeding began, and worked till it was over. During harvest I did nothing. I gleaned. After harvest I come to school.

(Reads well. Spells Metheringham correctly. Does not know the name of the county nor the Queen's name.) 6 times 6 are ——; 5 times 10 are ——; 6*d.* and 18*d.* are 24*d.*, that is 2*s.* I got 7*d.* a day, that is 3*s.* 6*d.* a week.

111. *John Hutchinson*, labourer's son.—I am going 8. There are eight of us altogether. Three are away at service. I went out weeding with my father last year and this year. Just gone to school.

> [N.B.—Of the oldest class (18 present, chiefly girls) 10 had been employed at weeding, two on their father's own land. Of the 2nd class (20 present) eight had worked at weeding.]

112. *Mrs. Mary Peart*, mistress of the Church National School.—Before I was mistress of this school I kept a private school for girls and infants for 15 years in this village. During the whole time I have experienced great interference to the attendance of children at school from their being taken out to work in the gangs or to help their parents on their own land. From what I have observed of the children after they have been out at work I think the employment does them much harm morally. My father was the master of the school at Blankney. He found the employment of children a great hindrance to school work there too. It is rather encouraged by the farmers now. I have never heard of any attempt to check it here. One of our principal farmers himself takes out children of 7 years of age and upwards to pick stones and gather potatoes. In hay time the elder girls work in the hayfield. In harvest they are all employed. At 13 girls go out to service. The tradespeople will take them at that age.

113. *Joseph Newton*, freehold cottager and ganger.—I have been in the habit of taking out children to work in the fields for the last 18 years. The work I have taken them to do has been weeding, picking twitch, and singling turnips; I have generally gone with girls and boys together. I have sent the girls with Scholefield when the corn was over high for girls, when I went with the boys. Parents never objected to the girls and boys going together. I can always get plenty of boys. I have taken out as many as 15. I have taken out 20 girls and boys; that is as many as a man can manage. I think it is much better that the man who goes with the children should be their master. When a farmer gets a lot of children and puts a labourer over them, they don't care for the labourer and take liberties with him, and then he has to beat 'em, as the man did the other day at ——. When the man who goes with the children hires and pays them himself, he can take them or not, just as they behave and they don't want any beating. I only go when I have got my own land done. I only go during May and June or a few days in July. I have been 18 year with them, and I can say before God and man that I never swore an oath in their hearing, nor even let one of them swear in my hearing. I know the children get ill-treated sometimes when they go with labourers I take lots of children from my neighbours here, and it isn't likely they would let me have their children if I ill-used 'em. It is quite right that children should go to school, but with large families it is necessary that their children should work. People must have enough to eat before they think about education. Poor people can send their children to school in the winter. Poor people with large families can get tradesmen to trust them in the winter, and then work off the debt in the summer by working themselves and their children. I don't think there was more than 50 or 60 out altogether in the full season from Metheringham and Dunston. During May and June is the principal time; only a few get out after harvest. A man must be a good-natured man to get children to come with him. We start at 7 in the morning, and leave the field at 5. Children have an hour for dinner and half an hour for breakfast.

DUNSTON, pop. 575. 114. *Joseph Brown*, farm labourer.—I work on a farm at Dunston. There is no village across the heath nearer than Coleby. The labourers employed on the heath come from Metheringham, Dunston, and Nocton. It is four miles to Dunston Pillar. Gangs of children are generally employed on the heath for singling turnips and weeding. They begin about April and work up to harvest. This morning (Nov. 2), a gang of about 15 or 16 girls and boys went out from Dunston with Dennis Carter. Matthew Woodcock is another ganger at Dunston. They generally take the work of the farmers. Sometimes the farmers pay them by the day, about 3*s.* to go with the children. I have had 15 children myself. I had five or six at home at once; I have four at home now. I don't like the system; I think it learns a child to be bad. There are so many together, the men can't look after them well. Some of my children went out in a gang. Gangs were common when my children were going. I got 'em to farmers as young as 8 to tent birds and do such-like work. I think that it is nought but right that it was stopped, girls going in gangs; bad discourse is always going on. Some of the girls are 13 or 14, and boys as old. Women go too, a-many.

115. *Mrs. Moody*, labourer's wife, Dunston.—On this farm no common gangs are employed. No girls are employed. Boys are employed under the foreman. Mr. Bramler used to have gangs. He has been here five years. Children do go about the other farms, girls and boys together, with a ganger. I have seen 20 or 30 together. When children go with the ganger he hires the children and contracts with the farmer to do the work for a certain sum. I think it is a good thing stopping the girls working; no girl ought to go out to this sort of work. They ought to go to service. I had only one daughter myself; I never let her go. I have seen the poor things in the field opposite, they look so mauled. The parents certainly get something by them, though it does cost a good deal for shoes and clothes. It is with large families of girls and no boys that parents have a great trial. Girls cannot get to service before 12 or 13, and then they do not help

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their parents beyond getting their own keep. Wages now are 2*s.* 3*d.* a day; most are only giving 2*s.* I fear everything is very dear now. Some people are very poor. The children are at work now at clearing and getting up turnips. I heard that 30 children were wanted this week to get up potatoes at Bramston Wood.

POTTER HANWORTH, pop. 413. 116. *Mr. W. Mayfield*, master of the National school. — Our largest attendance has been about 50 or 60 in the winter time. In May we should have about 40. We generally have about 20 from the time the potatoe setting begins to after harvest; they go weeding, tenting corn, and do other work. I have known as many as 20 girls and boys go weeding in the fens in the spring. It is on a large farm of about 700 acres that they are employed. There is no regular ganger here.

117. *William Wade*, labourer's son.—I was 9 last July. Last spring I worked on Mr. Headland's farm. I was four days there singling turnips. There were only three other boys with me.

118. *Henry Smith*, labourer's son.—I am 10 years old. I was pulling ketlucks in the spring. I was a fortnight at that. I then went to Mr. Headland's singling turnips. There were 13 with us. Robert Lee went with us; he is one of Mr. Headland's labourers. There were six girls with us. I began in May. "6 times 6 are 12." "5 times 10 are ——." Spells horse, turnip, correctly. "The sea is down "there" (points to the east). The sea is water. People go in ships on the sea. The queen is Queen Victoria. My comforter is made of flannel. Does not know what worsted comes from.

119. *George Brodell*, labourer's son.—I was 10 last March. I began to work in May. I was picking ketlucks at Mr. Dakin's. There were seven other boys with me; the boy there were 13. I was also a week or fortnight singling turnips at Mr. Headland's. Since harvest I have been picking potatoes.

HEIGHINGTON, pop. ——. 120. *The Rev. Frederick Day*, master of the Grammar school.—The employment of children between 8 and 13 years of age in the fields is very general in this parish, more particularly from Easter to the end of the potatoe harvest. Large mixed gangs of children are certainly not employed. It is common for farmers to have three or four boys under one of their own labourers. The farms are small in this parish; the largest is a little over 300 acres. There are many small holdings of 5 to 7 acres.

121. *Mrs. Clarke*, wife of Mr. C. Clarke, farmer.—It is a common thing for farmers to have five or six boys to clean turnips in the winter time or to pick stones. In spring they would be employed weeding or twitching. After harvest girls and women go out gathering potatoes. Women also go out twitching and weeding. Women get 1*s.* a day, children get 6*d.*, and some boys get 8*d.* The boys would be 10 years old. Boys and girls younger than 10 go tenting cattle and birds.

122. *Mr. T. Hodson*, overseer and farmer.—I know what you mean by hiring a gang for weeding very well. The only farmer who has anything of a gang here is Mr. G. Clarke. He farms about 1,000 acres, fen and upland. He generally has a gang of about ten boys from 10 to 14 years of age from the 1st of May to harvest time. After harvest he employs them for getting up turnips. All farmers have one or two day boys of 9 to 14 years of age. The land is much the same here as about Metheringham. I know that regular gangs have been employed there by the larger farmers for many years. Small farmers would not want the ganger. They would have a few men and boys of their own, who would do all the work. A large farmer has 200 or 300 acres of turnips, for instance; he wants them thinning while he has plenty of work for his regular men, and so he has the gang to do this work. At Metheringham they let it out to the ganger by the acre. I have heard it is very badly done, so that you may walk over a field and not know whether they have been there. The children go to school a good deal in this parish. It is very difficult to get children. There are good free schools for both girls and boys.

BOULTHAM, pop. 95. 123. *Thomas Storr*, labourer. —I live in Boultham. There are six labourers' cottages in the parish. There are two large farms. One is over 400 acres, of which 60 acres about are grass. On this farm there are only four regular men employed, including the shepherd and horseman. There are besides these men two farm servants, one 14 and the other 17, and two regular day boys, one of 13 and the other 16 years old. One of these labourers comes from Hykeham, two miles off, and one from Lincoln. One of the boys comes from Lincoln, about 1½ miles off. There are no girls or women employed in gangs here. We had three Irishmen hoeing corn in the spring on the farm on which I work. The turnip hoeing was let to two Lincoln men. The turnips were not singled; it would have been better if they had been. We get the twitch off after ploughing with rakes. The two boys worked with us. I have two boys myself; one is 8 and the other 9. They both go to school. The only girl I have seen at work here was one of our labourer's children from Lincoln. She was at work pulling up thistles, and she tented the cattle in a field where there was no fence.

I used to work at Collingham near Newark; I was in service with a farmer there. There we used to have a lot of boys at weeding from about April to harvest time. There were eight boys at work with one of the regular farm labourers, who worked with them and saw they did their work. The youngest boy was about 11 and the oldest 13. About there girls used to work with boys. I have seen four or five girls and seven or eight boys working together. I have heard nothing of that here. The land there was a good deal the same as this. I think if more weeding was done here the farms would produce more corn. Girls and women get up potatoes. We have none. —— has six or seven acres. He has two women and five girls to pick them up. There are no boys among them.

124. *Joseph Bird*, labourer's son.—I shall be 13 this summer. I began to work before I was 7. I used to work at picking twitch at Greetwell. There were 12 or 14 of us girls and boys, about half girls and half boys. The girls were older than the boys. One of the farmer's men looked over us. I got 3*s.* a week. I earned a new coat and breeches. I also worked with a lot of children picking stones. A man looked over us. He had a stick. He was not very kind; he was always hitting some of us. I went to National school a bit. I had two brothers and two sisters at home when I first went to work. I can't read very well (reads imperfectly). I was reading the Testament at home last night; I read to keep up my reading. I live in Lincoln.

125. *John Eastman*, labourer's son.—I am going 14. I live in Lincoln. I began to work in a rope-yard at 11. (Cannot read.)

126. *Matthew Hardy*, labourer's son.—I am 13. I have worked in the brickyard ever since I can remember. I live in Lincoln. (Cannot read.)

CANWICK, pop. 228. 127. *Mr. H. Ellis*, overseer. —Many years ago I used to see children between 8 and 12 working in the fields, six or eight together, with a man with a whip overlooking them. This man would be one of the farm labourers. I have not seen this for some time. We have only a few children in the parish now. I remember our miller remarking that it was a sin to see a man with a whip keeping children at work.

WADDINGTON, pop. 909. 128. *Mr. William Elridge*, overseer.—We have as many as 40 children in our parish, including boys of 12 to 14 years of age, who are regularly employed as day labourers. Boys and girls under that age work occasionally. I have seen as many as 14 or 15 together with a man overlooking them. Some of these children would not be more than 7 or 8. This man would generally be the farmer's own labourer; all farmers have some at different times. They are mostly employed in spring time.

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129. *Mr. Thomas Killsey*, baker.—Children do go out gangs now from this village. When I was a boy there was nothing of the kind. I have lived in the village 73 years. The heath was all enclosed then just as it is now. Women used to go out then much more than now for dragging turnips and picking twitch. Women did not hoe them; they do now sometimes. Children go out to clean turnips for the sheep. Sometimes 9 or 10 would be at work, according to the size of the flock. I have seen as many as 10 or 12 boys and girls come past in the evening with the man. Very few women go with them. The girls would be about 10 or 12. No girls of 14 or 15 would be with them; very seldom at least. The farmers send their own labourers with them. Sometimes the farmers let the work, and sometimes they pay the children themselves. My own children have gone singling turnips. I never sent my girls out; it was such dirty work; it spoils their clothes; besides, I don't think girls get any good from going out in that way. Some girls do go as young as 7 or 8.

NAVENBY, pop. 1,170. 130. *Mr. William Hales*, farmer.—I employ children for weeding corn in the spring time and singling turnips, picking twitch. After harvest I have them for gathering potatoes, picking stones for the roads, cleaning turnips when a turnip field is cleared and the turnips heaped. I have seen as many as 15 at work; that is too many for one man to manage; 10 is quite enough. I put one of my own labourers over them; that is the custom with all the farmers about here. We have no regular gangers. We let some of the work, such as cleaning turnips; nearly all is done by the day. Women are employed in the heath more than just here; the farmers there can't get children. The children are the cheapest; we can get them at 6*d.* or 9*d.*, the women want 10*d.* or 1*s.* The children work two or three hours longer than the women; the women never begin before 8; children work from 6 to 6. I think children are employed now more than they were. Labourers have been more plentiful here than now. Wages are 2*s.* 3*d.* a day; before harvest they were 2*s.* 6*d.* I do not think there are more than five or six girls above 15 who go out in the gangs. Women and children are employed by all farmers to shake manure. Very little hoeing is done by women here.

WELLINGORE, pop. 943. 131. *Extracts from the return sent to the Commission by the Rev. J. Peacock, vicar of Wellingore.*

Women and children are employed in large parties weeding, &c., in the springs and summers; but each is employed by the farmer, not by the gangman. They go at about 8 or 9 years of age, according to size, and many have to go three or four miles to their work, which lasts from 6 a.m. to 6 p.m. They are allowed half-an-hour for breakfast, and one hour for dinner. The sexes are mixed. They seem healthy; but when work puts in it thins the school; and I fear that this, like all other working in large companies, does not improve their morals.

LEADENHAM, pop. 688. 132. *Mr. Bland*, farmer.—I am acquainted with the system of farming on the heath as well as on the lowlands. Women and children are employed by all farmers, particularly for weeding during the spring and summer in the growing crops after they have been hoed. The children work in small gangs under a "stage" man, who works with them and sees they do their work; they would be then employed at stubbing thistles, pulling ketlucks. Women are never employed for hoeing. Most farmers employ women and boys, principally boys, for shaking manure. I use the hayshakers myself for this work, and so do some other farmers. There is not much twitch on the heath; there is a good deal of stone picking for the roads. There are no regular gangers here who go to different farms. The largest farm in the parish is about 500 acres; there are about 15 or 16 boys employed on this farm; other farmers would be obliged to have girls. Children go at about 9 years of age for weeding and singling turnips; boys are also employed for tenting wheat.

RUSKINGTON, pop. 1,089. 133. *Extracts from the return sent to the Commission by the Rev. C. Myers, rector of Ruskington.*

We have no gangs, properly speaking, in this parish, Children of from 8 to 10 years old are hired in numbers of about 10 or 12, for about six weeks in May and June, for the purpose of weeding corn. They are hired separately by the farmer, who also engages an overlooker. This is the only usage anyway like the gang system in this village. Even as thus modified, I believe the system is, morally, an undesirable one.

CRANWELL, pop. 233. 134. *Extracts from the return sent to the Commission by the Rev. R. A. Scott, Vicar of Cranwell.*

(1.) The children work in gangs, but are engaged individually by the farmer.

(2.) Aggregate number.—27; which are usually employed regularly from the beginning of April to the end of June.

(3.) Age of persons employed.—Eight boys and 16 girls, between 7 and 13, and three girls between 13 and 18.

(6.) Hours of work.—From 9 a.m. to 5 p.m. They assemble at 8 and arrive home at 6.

(8.) The workers are treated kindly under the superintendence of an elderly labourer or steady man.

(9.) The sexes work apart.

(11.) State of education.—All can read, and a large portion write.

(12.) Moral condition.—Rather defective, attributable to the example of uneducated parents.

THE MIDDLE FEN DISTRICT BETWEEN LINCOLN AND BOSTON.

The Middle Fen District.

BICKER, pop. 800. 135. *Rev. H. T. Fletcher*, vicar.—I have been in residence here 11 years. I have acted several years as a magistrate. Before I came here I was incumbent of a parish having a population of 9,000 in Lancashire. There were several cotton factories in this parish, in which the half-time system of the Factories' Acts, which insure schooling to children under 13 when employed, was carried out. The population of this parish is about 800, consisting of a few large farmers (only five holding more than 200 acres), one or two village tradesmen, several small farmers and cottagers, *i. e.*, labourers who own their own cottage and a little land, and the rest common agricultural labourers. Many of the small farmers hold only 10 to 20 acres. The acreage of the parish is 3,700; of this a considerable portion is fen land. The greater portion of the labouring population reside near the church and school. There are, however, a few scattered cottages in the parish, some at a distance of three miles from the village. There are two schools in the village, a church school and one supported by the dissenters. In the time of year when our school is best attended we have an average attendance of about 80 children of 5 years old and upwards. We never keep any labourer's children beyond 9 or 10 years of age at the highest. The attendance of all the children between 6 and 10 years of age is intermittent only throughout the greater part of the year. They are perpetually being called off for days or weeks together for some employment or other in agricultural work. During the corn harvest the school is closed altogether. After the corn harvest is finished potato gathering takes a great number of children. At the present time (Oct. 7th) we are just beginning to get them back. Potato gathering lasts about a month. The youngest children are employed in this work. The children are generally employed in this parish, not in large gangs, but as assistants to the parents or other workmen, who take work from the farmers at a certain sum per acre, &c. Insome cases the farmers pay the children themselves by the day.

Until quite lately children were employed to a great extent in helping the men who go about with the thrashing machines. The number of children thus employed is now much reduced. This employment is very bad. The men who attend these machines are generally a class that the farmers will not have as regular men. Their work is very irregular. When they are employed they get high wages, and the rest of their time they spend in beer houses.

Tenting cattle is another bad employment for children. Girls as well as boys are employed at this work between 10 and 14 years of age. They may be seen in our roads and lanes tenting cows, and in the dry season they are employed to tent pigs and sheep in the fen lands. The children have little to do all day but to lie about, or set together and play, with no person to control them.

During the spring and early summer the same class of children are employed in weeding corn.

Comparing the children of the labouring class here with those in the manufacturing district with which I was previously acquainted I should say that their intelligence is lower, and that they are far more prone to indecent language and immoral practices. I could mention cases of early depravity on the part of female children of which I had no experience whatever during 15 years residence among cotton spinners. I can certainly trace the origin of some of these cases to the employment of young girls and boys in the fields. I am now speaking of children of 13 and 14 years of age. Of course the insufficient sleeping accommodation for families is a very prominent evil.

I am convinced that nothing but some legislative interference can insure to these children anything like a necessary amount of education to fit them for their station as labourers. I do not mean that they require anything more than the simplest education in point of learning. Of course it cannot be expected that a labourer on 12*s.* a week with a large family on his hands can resist the temptation of 3*s.* to 6*s.* a week; but I think something may be done. I should say that the attempt to educate these children by means of night schools is unadvisable. The night school necessitates the children or young persons going home in the dark.

135A. *Letter to Prideaux Selby, Esq., the Secretary to the Commission.*

Bicker Vicarage, near Spalding,
July 13, 1865.

Sir,

I shall be glad to afford the Commissioners any information in my power. The "gang" system is not extensively prevalent in this district of north Holland. In the other half of the division, south Holland, it is so prevalent. In north Holland, however, there is a very general employment of children in agricultural work, in weeding, potatoe setting, and other labours.

There was recently an extensive and very mischievous use of children in attendance upon thrashing machines. I am thankful to say that it has been discountenanced, and to a great extent discontinued.

The employment of children in "tenting" cattle on the roads, is just now the most prominent source of evil in this district. Next to that the employment of their own children, female as well as male, by the cottage class.

In the course of a few days I hope to be able to send you a return, as nearly approximate to the truth as possible, of the number of children employed in agriculture in each of the thirty-four parishes and extra-parochial places in north Holland, the nature of their employment, and the time of the year during which they are engaged.

I may observe now, however, that the children's weeding time is gone by for this year; the dropping of beans and potatoes is, of course, over also. The gathering of woad, of which we have a few growers, takes place twice and sometimes thrice during the summer and autumn. The "tenting" of cattle continues from April to October.

The use of children in harvesting from the end of July to October or November. In the latter employment, the children generally work for their parents; the father "taking" standing corn at so much an acre to "cut and bind," and having the aid of his wife and one child, or of two children. In other cases, a labourer hires one or two children at so much a day to assist him in his "take."

With regard to south Holland, Kesteven, and Lindsey, I have no doubt the Commissioners will have access to better information than I am prepared, without inquiry, to give, but I shall be happy to afford any information and assistance in my power.

I have, &c.
Henry W. Fletcher.

To P. Selby, Esq.

N.B.—The following return was forwarded to the Commission by the Rev. H. W. Fletcher, in September 1865.

135b. Number of Children under 14 years of age employed during August 1865 in 23 parishes in North Holland, as under.

Parish.	1 Weeding and Wood Gathering.		2 Tenting Cattle on the Roads.		3 Working with Thrashing Machines.		Remarks.
	Males.	Females.	Males.	Females.	Males.	Females.	
Sutterton	1	—	—	—	—	—	At this season of the year there is no weeding, and but little thrashing. Some of the children who follow those employments are now engaged wood gathering, but the larger portion are helping their parents to harvest or glean, and do not appear in my return. H. H.
Wigtoft	2	—	2	—	—	—	
Algashirk	9	3	1	—	—	—	
Fosdyke	6	2	2	—	—	—	
Kirton	16	—	6	2	—	—	
Frampton	16	—	4	1	—	—	
Wyberton	2	2	2	1	—	—	
Skirbeck	4	2	—	1	—	—	
Wrangle	28	3	16	5	11	—	
Leake	15	6	12	4	2	—	
Leverton	6	5	4	3	—	—	
Brinington	8	6	5	6	7	—	
Butterwick	14	4	4	—	—	—	
Treiston	12	2	6	2	—	—	
Fishtoft	20	8	5	—	—	—	
Skirbeck, North	20	10	2	—	6	—	
Boston Long Edges	10	4	4	3	6	—	
Bicker	—	—	3	1	—	—	
Donington	—	—	5	1	2	—	
Gosberton	—	—	5	4	2	—	
Quadring	—	—	3	2	—	—	
Surfleet	3	1	3	1	2	—	
Swineshead	—	—	4	—	—	—	
	192	58	98	37	38		Total 423

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The Middle Fen District.

Mr. F. D. Longe.

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136. *James Staples*, boy with thrashing machine.—I am now about 17 or 18. I began when I was able to carry a pail of water; don't know how old I was. I was at work more or less from September to May with the machine; the other time I used to weed wheat and beans, and hoe sometimes. I went to school a bit before I began to work. I was at one school near a year and a half. I can't read now so well as I could when I was at school. I never did any arithmetic. Father is a labourer. I have three brothers and one sister. Don't know how old they are. I never have been to school since I went to work. We begin at 6 in the morning; we always start at 6. We generally give over about 6. We stay an hour or two later sometimes when we can finish a job.

137. *Philip Tracy*, boy with thrashing machine.—I was 11 last August. I have been three years with the machine. I spouts. I have worked pulling twitch. I have been to school a bit. Father is a labourer. I have six brothers altogether, only two at home.

(Can read imperfectly; does not know 6 times 8, 5 times 4.) I get 1*s.* 6*d.* a day. Don't know how much I get a week. Don't know how to multiply 1*s.* 6*d.* by 6. The parish I live in is Bicker; the county is England.

138. *Thomas Waits*, labourer with thrashing machine.—The thrashing work is very uncertain; it is like haymaking. The men are paid by the day. The men get 3*s.* a day and three pints of beer. They sometimes work a whole week and sometimes only half a week. My son got the same wages when he was 16 as I do now. I had eight children; I lost two. I had six at home. I had 12*s.* a week myself. I was obliged to send the eldest one to work at about 10 years old.

139. *John Whittingham*, labourer.—I am 75 years old. I have lived all my life in Bicker. Tenting cattle always went on. The children who used to tent were not so young as they are now. They go to it now at 9 or 10. It's only occasionally that a girl tents cows in the roads. It learns 'em a loose end. I had five children, two boys and three girls. I used to send them all to the free school. In my time our wages have varied from 1*s.* 6*d.* to 2*s.* 6*d.* a day. In the Russian war they were 14*s.* a week. I got full wages up to 68 years of age. I get 1*s.* 6*d.* now for road work. My children went out to work about 12, to take the average. They could all read and write except one. Thrashing machine work is very bad.

At odd times a farmer will have a lot of boys and girls, about a dozen I mean, to go twitching when his field is in a bad way. I worked in a gang like this when I was a boy, and I have had boys under myself; they were 14 or 15. The children are not used for this so much now. They have the horse-hoe and women weed.

140. *John Pinder*, cattle tenter.—I am going 13; don't know when my birthday is; not long 12; been three years at tenting; I am always at it. I go to school in winter. I tent up to a week afore Christmas. I begin again in April. Havn't been to school except after Christmas since I first began tenting. I was a week setting potatoes last April. I get 3*s.* 3*d.* a week. I got the same when I first began. I tent on Sunday afternoon and go to school in the morning.

(Reads imperfectly; 6 times 7 are—no answer; 4 times 5 are—no answer.

TATTERSHALL, pop. 848. 141. *The Rev. Mortimer Thomas Latham*, incumbent.—Our population is about 1,000. I don't think that the labourers' children go out in gangs at all in this parish. They are employed to tent birds and cattle in the spring. In the autumn they go out gleaning. They are at school up to 10; some stop in school till they are 13 or 14.

CONINGSBY, pop. 1,988. 142. *The Rev. M. Garfitt*, incumbent.—The parish includes a portion of Wildmore Fen. Our population is about 2,000, of whom about 800 live in the fen. The residents in the village are several of them engaged in trade. It is an open parish. There are several labouring men living in our parish who get only occasional work on farms in the neighbourhood. Labourers' cottages are distributed about the fen. When the fen was enclosed several small freeholders settled on it. These men work as farm labourers, and their children when wanted. There are no very large farms about here. Our largest farm is about 300. None of our labourers have to go more than two or three miles to work. There is a school at a place called New York, in the middle of the fen, about three miles from here. The children living in the fen go to that school. Since harvest the children have been picking potatoes; they now are beginning to come back to school.

143. *Mary Anne Lonsdale*, labourer's child.—I was 8 a week after last Christmas. Last winter I went out with my father getting up turnips for the sheep, that is the first time I went to work. I was at school regularly all the spring to gleaning time. After gleaning I went picking potatoes for four weeks. I have been to school about a fortnight. I can read the Testament and the Third book. I have four sisters and one brother. My brother is 12; he goes out to work regularly at Mr. Dixon's. One of my sisters is at school. My eldest sister stops at home to mind the baby.

144. *John G. Ely.*—I am going 9. I have been picking up potatoes. I worked at singling turnips for three days. I worked with my father. Father hoed and I pulled; that is all the work I've done.

145. *John Granton.*—I am 9; my birthday was last feast time (Michaelmas.) I have worked a week singling turnips at one place, and three days at another. I was a week tenting sheep. This is all I've done. Father is a labourer. I have one sister and one brother.

146. *Josiah Would.*—I am 12; I worked first about three years ago I think. I tented pigs on the stubbles. I never was more than a month or so at work at a time. I was at school all last spring. I worked at home sometimes; I was picking twitch last week. There were five boys with me. We picked up the twitch and put it in heaps.

147. *Dan Bernard.*—I am 9 somewhere on again next Good Friday. I have picked twitch, made bands, and some other work. I was at school last spring. I picked 'taters last year; I stubbed thistles; it was on my uncle's land. I have helped to set potatoes and pick up potatoes for the last three years for Mr. Wheatley. I was only three days setting potatoes. I have one sister and one brother at home. My sister is between 13 and 14; she is badly.

BILLINGHAY, pop. 1,462. 148. *Extracts from the Return sent to the Commission by the Rev. E. Jenkins, vicar.*

(1.) Five gangs, or rather parties, each superintended by a man, go out in the spring to weed the corn.

(2.) From 120 to 140 persons are so employed.

(3.) Hours of work.—From 7 a.m. to 6 p.m.

(9.) The sexes work apart with very few exceptions.

149. *William Paly*, carpenter.—The fens have been enclosed about 40 years. There are no large farms in this parish; only one farmer has about 300 acres. In spring, women, girls, and boys go into the fens out of the village to weed the corn; the women hoe sometimes. Their husbands take the hoeing and weeding of the farmers, and the women help them. They also go in gangs with a man; 20 or 30 go together. There are two or three men who have been gangers for years. The gangers are paid by the day, and they make out their bill to the farmer for the number of women and children they had with them. It has never been the custom here for the farmer to let the weeding to the gangers; they do let hoeing and weeding to the labourers themselves; they would take it at about 2*s.* 6*d.* and 3*s.* per acre. The gangers are what are called catch-work labourers. They sometimes go about with the thrashing machines. They are freehold cottagers.

150. *Mr. W. Hand*, schoolmaster.—There are as many as six men whom we call gangers in the parish.

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They take out women and children for weeding in the spring. The children go as young as 8, some of them. There are many girls of 15 or 16 here who stay at home and go to work in the fields, in preference to going to service. Children of 12 and upwards and women also go hoeing in the spring; the ganger only overlooks them. After the hoeing is done the children go weeding. It depends much on the character of the season how much work they have.

There is no National or free school in the parish. I take 15 children who are sent me by the vicar; all my other children are private pupils. There are private day schools and infant schools besides my school.

The children of the poor parents go to work as soon as possible. Many go at 6 years of age to pick potatoes. The girls and women assist at the thrashing machine; this is very demoralizing employment for girls. Nearly all our cottagers are freeholders. There are more than 150 freeholders in the parish. There are probably few parishes where girls stay at home so much. These cottagers have from two acres to ten acres of land. The girls associate with the boys in the fields. They marry early. There is very little thieving heard of in our parish, and it has been remarked that our parish stands well on the score of morality.

151. *James Fairweather*, cottager and ganger.—I have been in the habit of going out with women and children weeding for the last 41 years. We generally begin early in May, and get about six weeks on different farms. The women and children pick up weeds, thistles, &c., from among the corn. The fields are generally hoed first before I come. Women very seldom hoe. I should take from about 20 to 26; the children would be mostly 10 years old. The parents would be pleased to let 'em go younger than that, but we should not want them, as I can always get plenty of women. Out of a gang of 20 there would be 16 women. Women get 1*s*., a child of 10 would get 6*d*., older children get 8*d*., 10*d*., 1*s*. We can always get plenty of women. Sometimes we get a week's twitching about the end of October or beginning of November after the wheat has been sown. Sometimes land that has grown potatoes or wheat is scurried and harrowed, and then the twitch is picked off before the ploughing. We get very little of this. This is done by boys and a few women by themselves. Women and children also get up carrots, and mangold, and potatoes. The farmers don't have gangs to do this. We go about three or three miles and a half into the fen; we go to Timberland. There is a gang at Timberland waterside. I have a little bit of land of my own. Some of my girls are 14 or 15 years old, such as are not in service. Girls would always go to service if they could. There are so few people here who want servants, and no person to help parents in getting their girls places. All the fen land is weeded in the summer, nearly all by gangs. There are four large gangs go out of Billinghay. The land must be weeded. Farmers have women and boys all the year round besides the gangs.

They have no gangs in Wildmore fen because the land does not require it. Holland fen, which runs down to Swineshead, is the same as Wildmore fen; it does not grow so many weeds. I have lived on both. Some land wants no weeding; the heath land wants very little. If I had 20 women and children with me I should take about two days to weed four acres in our fen. I could weed the same quantity of land in the heath in the same time with four hands.

Edgar Beer always goes out with boys. He takes about 16 generally. He only does the same work, weeding. The women stick to me; he never had any women. I would not send girls and boys together in gangs without their mothers was with them. It would be a bad thing certainly for the girls and boys to go together. The boys would be sure to talk improper.

152. *Mr. Amos Lannyman*, farmer, Dogdyke.—My land is about three miles from Billinghay. I have no gang to weed my land. I only farm a few acres. I have two or three women and children to weed, and I look after them myself. There is a large farm adjoining mine of 1,100 or 1,200 acres. This farmer always has a gang on his land over the wheat and oat fields. This land is rich, low, and grows a good deal of weed. Wildmore fen is a heavier soil, and does not grow so much weed. Holland fen is the same as Wildmore fen. The soil here is dark on a clay bottom. Children begin to work at about 10 or 11 in the gangs. The gangs come here from Billinghay. They generally consist of about 16 to 20 women and children. They take a deal of looking after. I never heard of anything wrong coming of it. The gangs do nothing in the autumn. There are no turnips here. There is a good deal of twitching to be done on the fallows. Twitch is also got off by raking after scurrying the land after wheat. Boys and women rake it up. That is done now when they are going to put in tares.

SUTTERTON, pop. 1,338. 153. *Extracts from the Return sent to the Commission by the Rev. C. Moore, Vicar of Sutterton.*

(1.) There is no system of this nature existing in Sutterton or the immediate neighbourhood, *i. e.*, the adjoining parishes. In "*Gosbarton*, near Spalding," such a system, I believe, to be in existence. Men, women, and children, to the number of 12 to 20 are employed here and in the adjoining parishes, for potatoe planting, digging, and weeding. All are under the employ of the farmer, not a ganger. There is no doubt of the immoral tendency of this system even. Both sexes work together. The age of the children so employed is from 8 and upwards. The hours are for men from 6 to 6; women and children from 8 to 6; an hour is allowed at noon, and a short time about 10 in the morning.

I do not think that the treatment by the employers is in any way arbitrary or objectionable. The effect upon children of so tender an age must necessarily be physically most injurious. In a moral point of view, I cannot condemn the system too strongly. Schools are *just* built in my parish, which I trust will work favourably, but at the season of potatoe planting, or digging, or when weeding is needed, or other agricultural employment, for which women and children can be used, the schools are well nigh deserted. The 6*d*. or 8*d*. a day which the child has, is too great a temptation to the labouring parents to be resisted. The women's pay is 1*s*. to 1*s*. 3*d*. per day. I shall be happy to render any aid in my power that may be deemed requisite.

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SPALDING, pop. 8,723. 154. *The Rev. Edward Moore*, vicar of Weston, incumbent of Wykeham and Whaplode Drove, and head master of the grammar school, Church Street.—Gangs have become more numerous of late years than they were. The children employed in the gangs are not more in number, but they are younger in age, owing to the elder children being employed by farmers at work of a more advanced character than they were ever put to in former years. I have noticed this alteration in the age at which they are taken to work from the attendance of children in the schools. The wages which the children earn are much higher than they were a few years back. There are some farmers in the neighbourhood who do not employ the common gangs. The gangs of this town are employed in Deeping fen more than in any other part. This arises from the paucity of cottages in Deeping fen. This country suffers very much as Ireland suffers, from non-resident proprietors, especially Deeping fen. The gangs would consist of girls from 8 to 18 years of age, and boys from 8 to 13. Some of the gangs are

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much worse conducted than others, owing to the character of the superintendent or ganger. I believe there are some farmers who will not have mixed gangs. The first time I remember the gang system being brought to my notice here was in 1837. The system has always been condemned and regarded as a disgrace, such a disgrace that even farmers declaim against it. There has been, I believe, some change of late years, some of the gangs being confined to either girls or boys respectively.

155. *Extracts from the Return sent to the Commission by Robert Everard, Esq.*

The gangs are employed at from one to five miles distant.

The workers are on the land from about ¼ past 7 a.m. to ¼ before 6 p.m.; at the longer distances, until 5 p.m.

The employment is not prejudicial to their physical condition.

In this part of the country, to prohibit the labour of children would be to prohibit the proper cultivation of the land, and would press with extreme hardship on the poor, as the summer labour of the children is required to enable them to procure clothes, coals, &c., &c.; but it would be advantageous to have the system put on proper regulations. I would suggest, 1st. That boys and girls should not be employed in the same gang. 2nd. That boys should not go to field-work before 10 years of age. 3rd. That girls should not go to field-work before 11 years of age. 4th. That the time on their employer's land should be from 7.30 in the morning to 5. 0 in the afternoon, with one hour for dinner.

The wages in this county have always been high, and generally the population lives in great comfort, except in cases in which intemperance and immorality produce distress. The great evil is that the houses for the poor are not of sufficient size; and, although I am sensible of the difficulty, and of the objections which might be raised to it, I am of opinion that the greatest practical good which the legislature could confer on the labouring poor, would be that no cottage should be erected in future without three sleeping rooms, and that the proprietors of all existing cottages not having three sleeping rooms should, within three years after the passing of the Act, be compelled, where practicable, to alter their cottages so as to provide three sleeping rooms in each. The immorality occasioned (or rather the temptations to immorality; for in this locality the general morality is very high) by the want of sufficient house room, I should be afraid is great.

156. *Dr. C. Morris*, High Street, Spalding.—I have been in practice in the town of Spalding for 25 years, and during the greater portion of this time I have been medical officer to the Spalding Union infirmary. I am convinced that the gang system is the cause of much immorality. The evil in the system is the mixture of the sexes in the case of boys and girls of 12 to 17 years of age under no proper control. The gangers, as you know, take the work of the farmers. Their custom is to pay their children once a week at some beer house, and it is no uncommon thing for their children to be kept waiting at the place till 11 or 12 o'clock at night. At the Infirmary many girls of 14 years of age, and even girls of 13, up to 17 years of age, have been brought in pregnant to be confined there. The girls have acknowledged that their ruin has taken place in this gang work. The offence is committed in going or returning from their work. Girls and boys of this age go five, six, or even seven miles to work, walking in droves along the roads and by-lanes. I have myself witnessed gross indecencies between boys and girls of 14 to 16 years of age. I saw once a young girl insulted by some five or six boys on the road side. Other older persons were about 20 or 30 yards off, but they took no notice. The girl was calling out, which caused me to stop. This took place within the last two or three years. I have also seen boys bathing in the brooks, and girls between 13 and 19 looking on from the bank.

Another great evil and cause of immorality in this neighbourhood is the mixture of the sexes in small houses. The rent of cottages here is generally 5*l.* and 6*l.* a year. Labourer's wages are 12*s.* a week. The evil of crowded cottages is likely to be remedied now that the Union Assessment Act has been passed. I am now attending a man of 25 who is living on the Bourne Road. His mother sleeps in the same bed with him.

The gang system destroys all feelings of modesty if the children have any when they go to work. I believe that the practice of men and women living together unmarried has become less frequent during the last two or three years, owing to the guardians being so strict with regard to relief in all such cases, and there being now no charge made for marrying such people. I know that the proportion of illegitimate children in this district is very high. I believe some of the farmers are trying to discourage the mixing the boys and girls in the gangs. I know one farmer who occupies more than 1,000 acres in the fen who will not employ a ganger who brings a mixed gang.

The want of cottages is a great evil. I know instances when the rooms in which four families sleep do not afford 150 cubic feet of air to each person. The requirements for a hospital is 800 cubic feet for each person. I have known instances where persons have had to sleep in the same room where the body of a person was lying who had died of low typhoid fever. I was attending a child six weeks back who died of typhoid fever. There were 10 other persons sleeping in the room with this child. In the fens the cottages of the ground keepers are nearly the only labourers' cottages. The ground keeper is a yearly servant who lives at the opposite end of the farm to the farmer. As a rule, their houses are built low, with badly ventilated rooms. During the harvest the occupiers of these cottages are expected to afford accommodation to the Irish or other labourers who come for the harvest work. The ground keeper always takes lodgers; he agrees to do so when he takes his cottage.

I consider that the field work is decidedly healthy.

157. *Mr. Henry Tatham*, chairman of the Board of Guardians of Spalding Union.—I live at Moulton, and am the owner and occupier of land in that parish. My farm is about seven miles from Spalding. I never had a gang from Spalding. I employ a few children and women for weeding and such work. My land is not fen land. When I employ children I send one of my own men with them, and pay both the man and children by the day. The Spalding gangs, I believe, sometimes come out to Weston. There is no light fen land about here except Deeping and Pinchbeck fen. I have farmed in that fen. I do not think that the soil of that fen requires any greater quantity of children or female labour than the land in other parts of this Union which is not black land. I attribute the employment of gangs to the great extent to which they are employed in the fen to the absence of a resident labouring population, which renders it necessary for the farmers to draw from any depôt of labour that may be within reach labourers of any class they can get to do their work. Supposing the fen was populated in the same way as the other parts of this Union, or other districts where common gangs are not employed, I am decidedly of opinion that the adult labourers required for the cultivation of the soil would supply by their wives and children all the light labour required for weeding and other light work. Deeping fen was formerly much more in pasture than now, and since the breaking up of the grass land little or no additional cottage accommodation has been provided. There is no question at all as to the evils of the common gang system. The gangers are in many cases the worst characters in the place—men who prefer an idle life. The evil of the system is the demoralization of the younger workers, arising from

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the mixture of the sexes and the entire absence of proper control over the hundreds of girls and children who make up the gangs in their going to and returning from work.

Very few female children are employed in my immediate neighbourhood. The labourers' wives are employed. There is a scarcity of labourers about here.

The wages of women and children employed by farmers in gang work would range from 6*d.* to 1*s.* I think that there is a smaller quantity of adult labour employed in the fen land as compared with other parts than can be accounted for by the character of the soil. A great number of extra hands are always taken on for harvest in the fen, which enables the occupiers to get through the rest of the year with a small quantity. There are, I believe, many occupiers of perhaps 300 acres of land who have not at this time (December) a single day labourer employed on their farms. The fen farmers keep very few permanent labourers; you would find much difference in this respect on some farms. This last year I have been occupying 800 acres—500 acres arable. During harvest I only employed three men and three women extra hands. My regular hands are 20 men from 17 and upwards; only two or three under 20. Eight of these are horsemen, who lodge with my bailiff; besides these labourers I employ four boys..

I hold that field labour for girls is very bad. When they marry they are so ignorant and unable to manage, that much of the poverty of labourers arises from this incompetence on the part of the wife. When a gang only consists of the wives and children of labourers belonging to the farm on which they work the evils attending the common gang system do not exist.

158. *Mr. John Leaper*, superintendent of the county police, Spalding.—I have been here five years. I was previously at Horncastle and Gainsborough. The gang system did not prevail at either Horncastle or Gainsborough in my time, to my knowledge. At those places the farmers employed children and women at weeding and other such work, but not in any such numbers as to constitute gangs as they are here. Since I have been appointed this post the evil of the gang system as carried on here has been perpetually brought before my notice. It has always appeared wrong to me, and I can say that the general opinion of people in this town is the same. One of the evil effects which is most generally felt is that it spoils girls for domestic service. It induces many to refuse service altogether, and I know several cases where girls who have previously been in the gangs have gone to service and left to get back to their former life. There are many girls in this town between 14 and 20 who are regularly employed in the gangs while they are at work, and who during the winter time may be seen skulking about the town and in the neighbourhood of bad houses, showing their depraved state by their language and conduct.

The returns I have forwarded only apply to the children and women employed during the month of October in the regular gangs of this town; there would be considerably more employed than this number during the weeding season.

The great evil of the gangs employed here is the mixture of grown-up boys about 16 years of age with the others. There were 61 such employed in October last. I have known several facts which show the evil character of the system. About a year ago a ganger had a child born to him by a girl of about 20 years of age in his own gang. Two years ago two girls and a boy were convicted of stealing apples in an orchard. The orchard was adjoining the field where the gang was at work. It was proved that the theft was committed under the eye of the ganger, who took no steps to prevent it.

The gangs are employed principally in Deeping fen, a large district of arable land, with large farms, and very few cottages. Many of the labourers employed there come from Spalding. The gangs go six miles out in that direction towards Market Deeping: they also go out for six miles towards Boston; on the east to Moulton, on the south to Cowbit and Moulton Chapel, and on the north to Pinchbeck and Pinchbeck fen for about five miles.

159. *Mr. Albert Porter*, bookseller, Broad Street, Spalding.—I am a native of this district. I have been acquainted with the gang system all my life; in fact, I once worked in a gang. I worked when I was between 8 and 14 years of age. I was then apprenticed to the printing trade. I have been a bookseller for three years. I am now carrying on a Sunday school in a district where all the young people above 8 years of age are employed in field work, chiefly in gangs. There are about 100 persons in the cottages I speak of; of these there are five young women between 17 and 22. Three years back four of them had illegitimate children, and now the fifth has fallen. They are all engaged in gang work. It is my conviction that in each case the associations of their field work contributed more than anything else to their corruption. I know of one case where the ganger himself, a married man, has himself fallen through the corrupting influence of the system. The first gang I was in was composed of from 20 to 30 boys. There were no girls in it. The ganger was a man well known for his cruelty. I saw him beat one boy till his wounds had to be dressed. He kept us in the wheat when it was above our waists the whole of a wet day, so that we were working in drenched clothes, and any attempt to leave was met by a beating. That ganger has since been imprisoned more than once for cruelty at home. I got 6*d.* a day when I was 10; the oldest boy would not get more than 8*d.* I know that there are girls whose age does not exceed 12 or 13 who went to work every day during the summer months to Peak Hill, beyond Cowbit, which is about six or seven miles from their homes. I have been told by them that it is six or seven miles they go, because the land on which they work is beyond the farm house. I can say that on Sunday children attending my Sunday school show a state of exhaustion which is painful to witness. I am speaking of girls of 10 to 12 years of age. I do not think that it is the custom for the ganger when hired by the day to deduct anything from the money he receives for the children's wages. When he takes work by the "great" he will sometimes receive no profit, and other times make a large profit out of a week's work. I believe that as a rule the children would get better wages from the ganger than from the farmer, and for this reason, the gangers, being themselves poor men, have a sympathy for the children of their own class, and besides it is the ganger's interest to keep up the price, because his own children generally form part of his staff, and he would suffer as well as the other parents if the children's wages were low. I once worked a whole day for a farmer, with several women and children, no price having been fixed for our day's work. At the end of the day the farmer gave the women 8*d.*, which they took and grumbled; I took 3*d.*, which is the smallest sum I ever received for a day's work in my life. It was a whole day's work wheat weeding, three miles from my own home.

I can confirm all that has been said as to the obscene and blasphemous language that takes place between the boys and girls between 12 and 20, and the indecent words and acts which used to be forced upon youths. When we were walking home the ganger would set us singing obscene songs.

I have now from 6 to 12 girls, who are accustomed to go out in these gangs, who come to me to join in a sewing class in my house. My desire is to get at them if possible and save them. I was told the other day that none of the girls in one of these gangs could mend their own clothes.

160. *Mr. Edmund Stow*, relieving officer, Spalding.—I have been relieving officer for 27 years for the Union. It includes Spalding, Moulton, Weston, Cowbit, Pinchbeck, Surfleet, Gorleston, Quadring, Donninglas, and

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Deeping St. Nicholas (Deeping fen). The gang system as carried on here is attended by serious evils, particularly the demoralization of young girls; girls from ages of 10 to 17 go in these gangs with boys, and become ruined in consequence. There are many young unmarried women having children living in lodgings in this town. I know this from their applying for relief. In many cases these girls have been ruined by the gangers themselves. Within the last six months we have had four or five cases of girls of 18 or 19 applying for relief during their confinement, who are all girls who have been engaged in the gang work. The subject has been often mentioned at the Board, and the mixed system is generally regarded as a serious evil. I have heard it said that the farmers themselves in Deeping fen are trying to get their work done without mixed gangs. Little girls begin at 10 or 11 years of age, and hear the loose language of the elder ones. The rule of our Board is not to relieve boys of 10 years of age, nor girls over 11, in some cases 12 years of age, on the ground that they can get 6*d.* to 9*d.* a day at field work.

Frequently sicknesses arise from little girls going to work in wet and cold weather, and being thinly clad. The regular wages here for able-bodied men are 2*s.* a day, some are as low as 1*s.* 8*d.*, but not many. The regular wages have been 2*s.* a day for the last two or three years. For some work higher wages are given, such as hedging and ditching; some old men are employed at 1*s.* a day. Farmers complain of not being able to get labourers, when there are labourers in the town wanting work. These men would have to walk five or six miles to their work; they do not get higher wages for going a longer distance. I believe that in some cases they have half an hour in the evening allowed them for getting home. During the six months previous to the 29th of last September there were 10 unmarried women or girls who received relief during their confinement. During the same time as many as seven similar cases were taken into the house. These cases all occurred in Spalding parish.

161. *Mr. George Craven,* master of the Spalding Union Workhouse.—We have now in this house 28 illegitimate children, whose mothers were in the habit of going out to field work in these gangs at the time they were born. Many of these children were born here: others have been brought here, having been deserted by their mothers, or from their mothers having died. The total number of children in the workhouse is 78; most of them are illegitimate, but in the cases I have mentioned I know that their mothers were connected with the gang work. I have been master of this house for about 20 years. We can get places for girls of 13 years of age very easily. I don't think that we have any girls over 13 in the house now, except the children of mothers who are themselves in the house. We have many applications for girls of 12 years of age, but many more for girls of 14 or 15. It is rare, however, that we keep them to that age. At 13 they get 6*d.* or 1*s.* a week, and their food and washing. Children from the workhouse are preferred here as servants to the children of labourers brought up at home. I believe this is in consequence of the gang system.

162. *John Bedford,* labourer and ganger, Bourne Road.—I have been in the habit of taking out children for weeding and other work for about six years. I always get all the boys I can; they do more work than the girls; they do it more cleanly. The girls get clogged and mauled with their petticoats; I would not have a gang of girls only for anything you could give me. No women go with my gang, only boys and girls from about 12 to 18. I have only had 14 to-day (December 5th, 1865); I have 15 belonging to me. We begin about March, and get almost eight months work in the year. I always keep at it. A good deal of the evil in the gangs arises from their not being kept under regular gangers. Some men will go for a month or even only a week to do a single job, and then get a gang together by offering a little higher price than the regular ganger gives, and these men have no control over the children. I think it would be a good plan if the ganger was licensed, I have often thought so. There are now in this town seven regular gangers, and eight or nine others who go sometimes. Men often lose money by taking jobs at a certain sum, without knowing how long or how many it will take to do it, and then not get enough money to pay the gang, and so do not pay them all. This runs prices down. I generally go into Deeping fen, but sometimes to farms on the other side of Spalding. I only know two farmers in the fen who get their weeding done without a gang. I sometimes work by the day and sometimes by the "great." When I work by the day with the gang I pay all the farmer pays me. I get 3*s.* a day and a pint of beer for myself; I believe the others do the same. It must be known whether the ganger takes anything out of their wages or not. When I let a few hands to a farmer I get 1*d.* for each. I have been near six miles out to-day, to a farm in the fen. I had five girls and eight boys. I dare say I could get all boys now, but I could not do such a thing as turn off the girls. Farmers let hoeing, mangold taking, carrot taking, and potato taking, not twitching or weeding. I would never take that. I am sometimes employed just to hoe a field of corn, and then to weed it twice or even three times if I could get round. I agree at the beginning of the season with two or three farmers to do the work they want up to harvest. I should then work with other farmers on odd days, or let them a few boys to work under their own men. I have often had as many as 39 in the beginning of the summer, and then they will all break off. I am met on the other side of the fen from Baston (about 12 miles from Spalding). I never heard of farmers sending any cart to bring the children to and from the fen. I have heard of gangers taking them in their own carts. ———'s gang stopped out all night at Guthram; they were working to 8 o'clock pulling beans. ———'s gang has stopped all night too. It is not common at all. I know no farmers who have only boys or girls; there are none this way. I never take more than 40; I only have them all on Saturdays. I let some to farmers during the week, and have them all on Saturday to see that they are paid right. In the busy time each of the seven gangers would have as many as 40 each. There would be quite as many as 280 out with them, besides others not under regular gangers. One farmer always has women only under one of his men; if they were by themselves they wouldn't do three pen'orth of work a piece, they would be fighting. Farmers were wanting men all the summer, and would not pay more than 2*s.* a day. There were many men who would have worked on the farms instead of the railway, but they of course wanted more money than the farmers gave them. (Wages on the railway are 3*s.* per day.) Wages are 2*s.* now generally; one or two farmers are giving 2*s.* 3*d.*; all wet time is a loss to the labourer. During the winter many men only get a day or two in the week. A farmer with a 50 acre farm in the fens would have a horseman or two and a couple of day labourers. If he had 300 acres he would not have any more. My cottage is 5*l.* 10*s.*, with a little bit of garden. No good cottage can be got here under 5*l.*

163. *Mr. John Smith,* registrar of births and deaths for the Spalding district.—The system of employing young girls in the field gangs is decidedly demoralizing. The general opinion is that the girls employed in the gangs are a degraded class. I know of two cases, one here and one at Holbeach, where gangers have ruined girls in their own gangs, and then gone off with them, leaving their own wives and families chargeable. To my own knowledge several girls in this parish have been ruined from being employed in gangs.

164. *Mr. Charles Dolby.*—I used to farm between 600 and 700 acres near here; one farm was in Pinchbeck. I used to employ a gang of about 20 to 30 or 40 for a fortnight or so at a time. I got them from Spalding. I tried to divide the boys and the girls, and sent the boys into one field and the girls to

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another. Although we have tried to lessen the evil, the evil of employing boys and girls together in field work is very bad indeed. I think that the gangs are not so bad now. I have tried to prevent girls going to work altogether, and have persuaded their mothers not to send them. A vast number end in being prostitutes. I do not think that the gangs are in the habit of staying out all night; the occupiers do not encourage that. There are many employers in the neighbourhood who will not employ common gangs; Our farmers here are so much in want of labourers. Every year the scarcity of good men is getting greater. The railway work about here has drawn off men. Wages are 2*s.* or 2*s.* 3*d.* a day.

165. *Mrs. Crampton*, labourer's wife, Spalding Common.—I have had eight children to bring up; three are girls now in service. I have a girl of 13 at home now; I shall get her out as soon as I can. She has to work in the fields now. The girls of large families must work. All my girls have worked. My husband is only getting 12*s.* a week. Working in the fields is very bad for girls if they are kept to it; it is the parents' fault; they only think of the money. If the girls get a taste for it it is very bad.

166. *Thomas Crampton.*—I shall be 8 next April. I have been out two summers with the gangs. I get 6*d.* a day. I never hoed. I cut off tops. I was out this morning; we came home because it was wet. (Reads imperfectly.)

167. *Mary Crampton.*—I shall be 14 next Christmas. I go to night school. I had rather go to service than go to the fields. I hoe and dig carrots. Digging carrots is very hard work. The gangers takes the work, and makes the children work so hard. We always know when he has taken the work. We have to work so much harder. We always break off at 5. I never heard of any children being taken in a cart. Once a farmer at Weston wanted our gang, and promised to send for us, but he didn't. I don't know whether the farmer himself promised, the ganger told us he did.

168. *Mrs. Goy*, labourer's wife, Spalding Common. —I have three children to bring up now. The eldest is a girl of 9 years old; she has never been to work in the fields; she goes to school near here. My husband used to go with the thrashing machine; I used to go with him, with two other women. No children went with the machine.

169. *William Hutchins*, labourer, Spalding Common.—I have five children, two boys and three girls. My eldest girl is 13. I have been a farm labourer till lately. I now have work on the railroad. I worked on the farms about here till last May. I never worked regularly for one farmer. There are always a good many labourers here whom farmers employ for a few weeks and then discharge. Many farmers of 200 acres do not have more than two labourers at work all the year round; I mean day labourers, besides the young fellows they have in their own houses. Many farmers employ gangs to do work which men apply for and are refused, such as hoeing, and mangold taking, carrot digging, &c. The farmers set men to do hoeing when they can't get gangs to do it. A man would ask 2*s.* 3*d.* or 2*s.* 6*d.* an acre for hoeing. I never heard of a ganger taking hoeing at 1*s.* an acre. I never heard of either farmers or gangers taking children in carts. Many of the children have to stay at home from having got bad from wet.

170. *Elizabeth Hutchins.*—I am just over 13. I was nearly 9 when I first went to work. I get up at 5 o'clock. I get 10*d.* a day now. I used to get 6*d.* I was about a fortnight back (November) with Martin's gang. There were 20 of us carrot digging. Each child brings her own tools. My father finds me my tools. I have hoes of different sizes, a muck-fork, and a carrot fork, a twitch basket, and a twitch rake. I was 12 when I first hoed. The little ones are often knocked up coming home. I go to night school. (Can read.)

171. *Robert Hutchins.*—I am 10 years old. I go to school when I am not at work. I can't read.

172. *Ann Hutchins.*—I am 11 years old. I go to work sometimes. (Reads imperfectly.)

Deeping St. Nicholas, pop. 1,180. 173. *Mr. John Eldred*, farmer.—I am seven miles from Spalding, and four miles from Deeping St. James. I farm 320 acres, all arable land. I have not one cottage on my farm. I have only one labourer on my farm now. I have four horsemen lodging about. I have no room for more than one in my own house. I have labourers from whatever place I can get them; they come and go; we have no hold on them, as they are not in cottages on the land. We can get light work done by gangs. I should get my gang from Deeping. I get women chiefly when I can. There are 15 or 16 farms about here similarly situated to mine. The labourers we get have to walk four miles from Deeping. The farms average 250 acres. Within the last six or seven years some of the small owners have built some cottages; the large owners have not hardly any of them. The fen was in much the same condition 20 years ago as it is now. The land was badly drained before the steam engine was erected, and then the rents were lower. I should think that 38*s.* to 40*s.* per acre would be the average rent now, and 30*s.* the rent 30 years back. The quantity of weeds growing on the fen land diminishes every year on land which is well farmed. When the land has been clayed the weeds will be less. I don't think that the land requires less labour than stronger land. We have about three horses to every 100 acres. We want gangs because we cannot get men. For raking twitch, breaking manure, men would be as cheap as children. We have no haymaking machines here. Children are cheaper for weeding, picking twitch, and gathering mangolds on light land. The hoeing ought to be done by boys at 1*s.* a day.

174. *Mr. Coates Maples*, farmer, Deeping St. Nicholas.—My farm is situated in the fen, five miles from Market Deeping, and six miles from Spalding. I have three labourers who live in cottages on my farm, and another who lodges in a public-house near. All the lodgers are single men. There is a great want of cottages about us. If there were enough cottages I think that there would be all the women and children near us for the work for which we now require gangs. There is only one opinion as to the injurious and demoralizing effect of the gang system. I have now a gang of about 15, women and children, twitching (Dec. 6.) I pay the ganger by the day. I give him 2*s.* 6*d.* a day; he charges me so much for each child; he gets 1*d.* or 2*d.* out of each shilling, I believe. I am sure that I could get my work done better by children under my own foreman than by the ganger. I have often said that if I could get a gang myself I would not have the ganger. Both sexes perform the offices of nature in the midst of each other without going away any distance. Girls and boys begin to work at 7 or 8 years of age. In the gang now working on my farm there is one woman over 30, four girls over 18 years of age, and about four others between 10 and 14.

Pinchbeck, pop. 1,518. 175. *The Rev. West Wayet*, vicar.—I have been resident in Pinchbeck 31 years. I am confident that the gang system did not exist in this parish 20 years ago. At the present time we have one ganger at least. I do not think that any of the children in this parish go in his gang. Gangs pass here from Spalding. I have not heard them lately. In the autumn they come most frequently. There has not been any alteration in the quantity of land brought into cultivation, nor in the size of the farms, during the last 20 years. I think that children are employed now more than formerly. I think women were employed then more than now. There is a greater scarcity of adult labour now than formerly. I am not aware of any alteration in the wages. I believe that 12*s.* have been the average wages all along. I have known them up to 15*s.* when corn was very high, and as low as 10*s.* Our farms are generally about 200 or 300 acres. There are several small holdings. I know that the moral effects of the gang system are bad. In my own parish there was one case of a girl of 17 being seduced by the ganger; he was a man of nearly 70 years of age. I should say that 13 or 14 was, generally speaking, the lowest age at which girls can get into service. I have known of girls being taken at 12 years old; these were exceptional cases.

175A. *Extracts from the Return sent to the Commission by the Rev. West Wayet.*

(5.) They go five or six miles to work.

(8.) The workers are treated sometimes kindly and sometimes harshly. Cases have been known of cruel treatment.

(11.) State of education.—Children are taken away from school too early.

(12.) Moral condition.—The moral effects are exceedingly bad. The language used is shocking to every right-minded person; cases of seduction by the gangers themselves of quite young females. It is highly desirable that the system should be abolished altogether, or at any rate placed under very stringent regulations. It is of comparatively recent growth, and has arisen, I believe, chiefly from scarcity and expense of adult labour; but it is an almost unmitigated evil, and detrimental to the educational, moral, and religious welfare of the rising generation. I doubt whether even the precaution of appointing only licensed gangers would be effectual, as a clever labourer would generally command employment, irrespective of character.

176. *John Stubley*, labourer and ganger, Pinchbeck.—I am in the habit of taking out children to work in the fields. I generally take boys. I often have girls. There are not many people in the parish who don't let their girls go. I have had girls of 18 or 20 years of age, and girls of 14 or 16, who are not in service. There are not so many girls of that age in the parish now as there used to be. The boys are some as young as 8, and some as old as 14. I have from 10 to 20 boys at different times. They come from different parts of the parish. I work on one farm in Deeping fen, six miles off. I take a horse and cart and take children in it. I have two carts and keep two horses. At flax pulling time I have a large number of girls and boys and women. I have two boys of my own out this year. There is a ganger who comes here from Spalding. I have hoed 20 acres of ground in a day with a gang of 30. It would cost the farmer about 1*l*. The children's wages would be some 6*d*. and some 1*s*.

177. *Mr. William Robinson*, Cuckoo Farm, Pinchbeck.—I farm in Pinchbeck fen. A great part of Pinchbeck parish is good strong land; part is light peat soil like Deeping fen. I farm about 250 acres, of which a portion is black fen land drained by the Pold Hole engine. My farm is three miles from Spalding. I have no cottages at all on my fen farm. There are cottages at Pold Hole. I have given up employing gangs for six years. I have from 12 to 16 women. I tried to get the women to work alone, wishing to avoid mixing the sexes at work altogether. I found that the women would not work without a man over them. I gave up the gang system because I found out the demoralizing effects of it. I had myself heard the language of the girls in the gang, which was very profane and as bad as could possibly be. The ganger was near taking no notice whatever. When I was farming with my uncle, who farms about 600 or 700 acres, we had two private gangs of about 16 each, boys and girls mixed. I noticed the evils of the mixture of boys and girls in this case. Of course the girls and boys have to perform the offices of nature in the midst of the gangs, or at the most a few yards off. I have 12 to 16 women at work all the summer, from the middle of April to July. They hoe as well as weed. I should always want as many women as that, however clean I kept my land. The fen land grows more weeds than the old tillage land. The claying of the land will reduce the weeds. I have not a third of the weeds in the parts which I have clayed. It is perfectly true that in many of the fen farms there are not more than one or two labourers now employed. I have eight men at work now, three horsemen, five day labourers, and two boys. I shall keep the five labourers through the winter. I don't know how it is that other farmers cannot find work for the same number of men in proportion to the acreage of their farm. I can get hoeing done with the draw hoes by my own women at 10*d*. an acre. A ganger will take light land at 1*s*. 2*d*. per acre. A man would get 2*s*. an acre for hoeing the same land as would be probably done by a gang at 1*s*. A great deal of the hoeing in the fens is done by gangs. I believe though that the man at 2*s*. is cheaper than the gang at 1*s*. for all work that can be done by either, even down to weeding. The employment of child labour seems cheap, but it is not really cheap, because the work is not done well, the weeds instead of being pulled up are only plucked off. Digging carrots is not a woman's job at all, it is hard work. For pulling and topping mangolds women would be cheaper than men; so for pulling turnips. Hoeing is best done by men; once with men is better than twice with a gang. For breaking manure one man is as good as two women, and counts just the same. I have been a guardian for 14 years. The little farmer and other small ratepayers complain often that they are compelled to send their children out when they are paying for the maintenance of pauper children of the same or an older age. Little farmers have to pay a higher rent in proportion to the quantity of land than large farmers. I think that the separation of the children of different sexes in field work must be effected if possible.

178. *James Hayes*, labourer, Spalding.—The custom for farmers to pay 2*s*. 6*d*. per acre for wheat hoeing when wages are at 2*s*. a day. We reckon that a man hoes an acre a day, but it is a long day's work sometimes. Some men would take longer than others. In Deeping fen hoeing is much easier than in heavy land. It does not matter how many weeds there are for hoeing.

179. *William Lloyd*, aged pauper in the Spalding Union Workhouse.—I am now in my 78th year. I lived in Pinchbeck. It is now 11 years since I went with children. The first time I ever went was to Mr. Ploughwright's. There were gangs before that in Pinchbeck. There were only two of us at first, and then Stubley joined us. I used to have from 10 to 20 children. I have had girls as young as 10, and boys at 8 years old. Some of the girls were 18 or 20. We used to hoe and hand-weed. Children could not hoe in hard clay land. On fen land children can hoe. I never took hoeing with a gang. The farmers paid me 1*s*. 6*d*. an acre for hoeing. I was paid separately. I had 3*d*. a day higher than the regular wage. When I hoed the same land myself 2*s*. an acre was the price. The farmer saved about 6*d*. an acre by having the children. I have hoed on heavy land for 3*s*. an acre. In most of the farms in Deeping fen the hoeing was done by the gangs. Girls and boys both used to hoe at 10 years of age. It was a very nasty job for girls when the corn was wet. I got nearly all my girls from Pinchbeck. I had a few from Surfleet. I had three of my own; two were girls. They worked about two years. The oldest was 14 when she left. Several girls have kept with me up to 17 or 18 years old. It is very bad work for girls. I think it were a deal better if they were not allowed to go at all. The furthest farm I used to work at was five miles off at Deeping fen. We always came home. We walked all the way; the farmer never sent us. We used to have asses to help us. Two or three children rode at once by turns for a mile or so. I generally worked in Pinchbeck. I worked a good deal on clay land. We hand-weeded clay land. We also picked out twitch and singled turnips. Two boys at 8*d*. would do more than a man at 2*s*. a day. We got up turnips and mangolds. I took these jobs at 9*d*. and 10*d*. an acre. The stronger children pull them up, and the lesser cut the tops off. I should take perhaps a score for this work, according to the size of the fields. One man

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and four boys could do an acre in a day of turnips, and more than an acre of mangolds. I don't think that three men could do an acre in the same time. We used to work very hard at that work. I always began before the children came.

BOURN, pop. 3,717. 180. *Extracts from the Returns sent to the Commission by the Rev. T. Dodsworth vicar of Bourn.*

(3.) Numbers and age of persons employed under 7, none. Between 8 and 14, about 40 boys, and 50 girls; over 18, none.

(5.) They go four or five miles at times.

(6.) They assemble in the town at 6 a.m., and walk to their work, and return, having walked and worked 12 hours.

(8.) The workers are treated very well.

(9.) Males work on one side, and females on the other, and the man is between them.

(10.) Influence of employment on physical condition very injurious to females.

(11.) State of education.—Sadly interfered with by the work.

(12.) Moral condition.—Anything but satisfactory; I should say very loose.

(13.) I consider the system both injurious to the health of females, and the morals of both sexes.

BASTON, MARKET DEEPING, pop. 787. 181. *Extracts from the Return sent to the Commission by the Rev. Henry Prior, vicar of Baston.*

(1.) Yes; a man called a "gang master" takes a certain quantity of work from a farmer, such as weeding, pulling up carrots, turnips, and mangolds. He then hires boys and girls at from 3*d.* to 9*d.* a day to complete the job, and goes with them into the fields as overseer. There are three gangs in this parish. It has existed here about 30 years.

(3.) Many of the persons not being parishioners, it is impossible to give the particulars as requested in subjoined table of the ages; but some are hired as young as 6 years, and some females as old as 20 and 22. I have not heard of any married females working in these gangs.

(4.) In October in pulling and topping carrots; in November doing the same to turnips and mangold wurzel. Winter in weeding. In spring in weeding amongst the wheat. Summer in weeding.

(5.) The average distance is three to four miles. A few boys from an adjoining parish, as much as six. Two little girls who reside in this parish have walked five miles to and back from their work during this summer. The eldest not being more than 10 years old. They occasionally attend the school in the winter.

(6.) Ranging from 5½ to 7 a.m. until 5 p.m., *i. e.*, leaving for work at 6, ceasing to work at 5, and reaching home between 6½ and 7 in the evening.

(7.) Half-an-hour at lunch, one hour for dinner Taken on a bank.

(8.) If idle or careless, they are excited to greater care and diligence with oaths and curses, an occasional kick, and if these fail, are beaten with a stick.

(9.) They work together.

(10.) Very injurious, as they get very wet, especially when pulling and digging mangel wurzel in the winter. In the spring when weeding amongst the wheat, they get wet up to their middles, and have to take their meals in wet clothes. The females complain very much of this.

(11.) Very defective. Many not being able either to read or write, and being too tired to attend a night school. We have a night school where a few attend, but they frequently fall asleep from complete exhaustion.

(12.) Most lamentable. All the parents of these children (with whom I have conversed on the subject of the "gang system") acknowledge the great and incalculable *moral* evils arising from it, and several refuse to let their daughters go to the work. I am informed that the conversation and songs, when at work and returning home, are most obscene and disgusting, and that it is quite common to hear children not above 8 years old swear, and that such conversation is *sometimes* encouraged by the gang master. The "gang system" seems likewise to beget a dislike in the minds of the young to education, and if work can be procured, the school (the only *certain* income of which does not amount to 13*l.* per annum) is nearly deserted. In short the "gang system" acts injuriously upon the physical, the mental, and the moral condition of the poor.

(13.) A representation has been made to me that the landlords have been more or less to blame in the matter, in driving the people out of their own parishes into the open parishes. A probable means of abolishing the "gang system," would be the erection of convenient cottages nearer to the scene of labour. The rents in this parish range from 4*l.* 10*s.* and upwards.

H. P.
December 29th, 1865. Vicar.

MARKET DEEPING, pop. 1,337. 182. *Rev. W. Hildyard*, rector.—Nearly all the land in this parish is in the hands of three occupiers. One of these three occupies about 500 acres; he is a large distiller and farmer; grows a quantity of herbs; and requires a good deal of weeding work to be done. He is in the habit of employing a number of boys for planting and weeding; sometimes these boys work in separate gangs under one of his own men. He employs more boys in the summer than in the winter. These gangs are very well ordered. The boys would be from 10 to 16 years of age. This employer pays a portion of the night school charges, and requires them, so far as he can, to attend the night school during the winter months, that is, from October to February. The other two occupiers employ a gangsman; the same man works for both; he has a mixed gang of boys and girls; he conducts his gang well; he makes a point of going and returning with the children; he is a very respectable man; this gang is so well conducted that I cannot complain of any evils resulting from it. The majority of them are boys. There has been a decided improvement in the behaviour of this gang from its being under the management of a respectable man. I have met gangs returning from Deeping fen, and observed the extremely improper behaviour of the persons composing them. I have seen great girls and boys among them. This parish is peculiarly well off for respectable well-to-do people. There are several persons living here who have retired from business, either as farmers or tradespersons, who employ servants.

183. *Mary Butcher*, mistress of the Church girls' school.—I have 50 girls attending school. None of the girls in this school have left for work. The attendance at my school is the same in the summer as in the winter. We don't let the children leave for work. With a very few exceptions all the girls in this school go out to service upon leaving school. We keep to them to about 14 years of age, and then Mrs. Hildyard gets places for them. They generally get places at 14 years of age, and very few leave until they have got a place.

184. *Mrs. Osborne*, wife of John Osborne, gangmaster.—My husband has been in the habit of taking out children for more than 20 years; he works on several different farms; the furthest farm he goes to is in Deeping fen, about three miles off; he is paid 2*s.* 6*d.* a day. Sometimes the farmers have three or four of his boys without him; in this case my husband pays the boys, and charges the farmer 8*d.* a head, large and small, and then takes his chance of getting a few halfpence out of the money he pays the boys. His largest number in the summer is about 30; in the winter he has about 12 or 14. No little ones go in his gang in the winter, nor any girls. I don't think he has any children under 10 now. The highest wage he gives is 10*d.* The average wage is 8*d.* He

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has only one girl out of this parish, and six out of St. James'. I used to go out with the girls. My husband now takes both, but keeps the girls separate from the boys when at work and at dinner time; he always walks with them, both going and returning; he never allows any bad words, nor any talking or singing.

185. *Mrs. Wherry*, servants' registration office.—In this place girls are generally able to get places at 14 years old, often at 13, if they are well brought up. Farmers generally have a kitchen maid of about 16, and a housemaid or nurse of 13 or 14 years old. Some large farmers have three servants. Almost all the tradespeople have one servant, and some two. We get servants from St. James' and from Langtoft. Ladies do sometimes say that they will not have servants who have been at field work, but I often get places for girls who have been working in the fields. Girls generally go to their first places at 13 or 14 years old. I often have girls of 15 or 16, or even 17, applying for their first place; these girls would not get more than 3*l.* a year, instead of 4*l.* 10*s.* or 5*l.*, which they would get if they had been in service before. I have more applications now for good servants as cooks and housemaids of 24 years old and upwards than I can supply, but I have more applications for places for girls of 13 or 16 than I get for them. I don't think that there are more than 12 girls between 13 and 16 who have asked for places and not got them at the present time. I have sent 20 girls to London since last Martinmas.

Deeping, St. James', pop. 1,763. 186. *Mr. G. H. Deane*, master of Tigh's boys' school.—Our general attendance in the winter is 75; at the present time our average attendance is 45. The majority of the boys who are absent from school now are at work in the gangs. Several of these boys are 8 and 9 years old; one is between 6 and 7; another is about 7.

187. *Mrs. Fielden*, wife of J. Fielden, gangmaster.—There is only one other man in St. James' besides my husband who goes regularly with children. In the summer two or three more start. My husband generally works in Deeping fen at one farm; that farm is near Littleworth Drove; it is six miles off. My husband used to live on this farm; he has been there with the children the last month or so (April and May) every day. Agus's gang also goes into Deeping fen principally. My husband gets very little gang work in the winter; he very seldom gets other work. There are a good many men without work in the winter time. The farmers never send waggons to bring the children. They start at half-past 5 in the morning, and get home again at 6 in the evening; they leave off work according to the distance they happen to be from home; they sometimes are working eight miles from home.

N.B.—From information I obtained from school children I found that the following young children were working in this gang at this time:—

Samuel Wright	-	about 9 years of age.
J. H. Underwood	-	about 8.
J. Prentice	-	between 7 and 8.

Langtoft, pop. 746. 188. *The Rev. J. Warren*, vicar.—The mixture of the sexes in the gangs is the principal evil of the system. It is fully recognized by both magistrates and police. The girls in our parish do not go to service, but are constantly prowling about the country wool gathering. We had a case the other day at the Bourne petty sessions,—two girls were convicted of stealing wool. Four young women appeared as witnesses who were engaged in the same pursuit; they were 10 miles from their homes at the time. The moral character of these girls is as bad as can be. A respectable man, a mason, observed to me the other day that he would rather turn out of the road than meet a gang returning from work. We have no large farmers; only one farm of 300 acres. Most of the labourers in my parish work in the fen, about five or six miles from their homes. Langtoft is an open parish, surrounded by the fen on one side, and by small close parishes on the other. Labourers go into these parishes three or four miles. There is a want of cottages in these parishes to the west of Langtoft. I find that the average attendance at the school during the six best winter weeks was 78. The present average attendance (May 22, 1866,) is about 30. There are some children now at work in gangs as young as 7 years.

188a. *Extracts from the return sent to the Commission by the Rev. J. S. Warren.*

(1.) There are two regular gangs during the summer, and sometimes three; in the winter seldom more than one.

(2.) The aggregate number of males employed is 18; of females 24.

(3.) Number and age of persons employed.—Between 7 and 13, 16 males and 8 females. Between 13 and 18, 2 males and 14 females.

(5.) They go to work from a quarter of a mile to eight miles.

(6.) Their usual hours of work on the land are from 6.30 a.m. to 5.30 p.m.; though this is to some extent modified by the distance they have to go. In summer they assemble about 5 a.m., and often do not arrive at home until after 7 p.m.

(10.) Influence of employment on the physical condition.—On the whole beneficial. In some cases excess of work may stunt the growth, though generally the workers are healthy, from living in fresh air.

(11.) State of education.—At a very low ebb. Children are taken from school at an early age, and few remain during the summer.

(12.) Moral condition.—Extremely low.

(13.) I consider the mixed gang system productive of the greatest evils. The language of the boys and girls is notoriously blasphemous and indecent; and their conduct tallies with it. Moreover, the girls become unsettled by the kind of life, and unfitted for service.

In a country where labour is scarce, the employment of gangs of *boys* becomes almost a necessity, and would not, under certain regulations, be objectionable. I think that no boy should be allowed to join a gang under 11 years of age, and it would be well if some system could be devised which would insure some kind of education to those thus employed.

John S. Warren,
Vicar of Langtoft.

Holbeach, pop. 4,956. 189. *Mr. Charles Webb*, second master of the Holbeach Grammar School, and registrar of births and deaths for the Holbeach district.—Our school is open to all classes, and I experience the effects of field work on the attendance of the boys. We take boys of 7 years of age and upwards. The average attendance of boys in the summer is about 80, and in the winter about 140. It is a free school. I attribute the absence of the boys in the summer months to the field work. Children are employed largely in planting and gathering potatoes in this parish. Girls and women are employed generally in the fields here. There are a great many girls between 11 and 14 employed. Half the population is in the town and half scattered about the parish. It is only in the potato gathering season that I have noticed large numbers of women and children gathering together for their work. The last volume of the Register of Births shows that from the month of May 1864 to December 1865 there were 371 births registered, and of these 50 births were illegitimate.

189a. *Mr. Alfred Miles*, Holbeach.—I have farmed eight years in this parish. I employ a good many women and children in gathering potatoes. I use the horse-hoe, and employ between 6 and 12 hands for weeding after the hoe; these are boys and girls who work under the superintendence of one of my own labourers. The land generally requires only to be hoed and weeded once, but sometimes it is done twice. I do not do all my hoeing with the horse-hoe. Women

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are employed to hoe about here; I prefer men. I am giving 2*s.* 3*d.* a day wages now; 2*s.* is the general price. There has been a scarcity of labour about here. I think that some of the evils arising from the mixing boys and girls in the fields might be remedied by better management. It is the farmer's interest to have the children well managed. I have children now employed at picking up potatoes. The language used by the children is beyond conception.

190. *Miss Laws*, mistress of the National girls' school, Holbeach.—The attendance of girls in this school varies from 80 to 100 in the winter months, and from 50 to 60 in the summer. There are about six girls in the school as old as 13. The girls go into the fields a good deal in the summer, *i.e.*, from March to November. The girls who go to work are very rough when they come back to school. I never heard any bad language in the schoolroom.

191. *Mr. William Crawley*, farmer, Holbeach.—I farm nearly 500 acres. My land is what is called marsh land. There is fen in Holbeach. This fen is not so peaty as the Deeping fen. There are no common gangers in Holbeach. My system is to employ boys, the sons of my own labourers, under the superintendence of one of my own labourers. I employ no women and girls, except at harvest time, with their husbands or fathers, to make bands. I get all my weeding, twitching, and other light work done by boys. I use the horse-hoe as much as possible. I employ from six to 10 boys at different times of the year. The boys are now employed getting up turnips. Turnips can be got up just as well by men and women as by boys. I think there would be a difficulty in getting our work done, if we could not employ children under 10 years of age, unless our population were larger than it is now.

LONG SUTTON, pop. 2,486. 192. *The Rev. Leigh Bennett*, vicar.—The system of employing gangs of children is not organized in this immediate neighbourhood as it is in some parts. I know of no organization under regular gangers, but I believe that the system as carried on here is as bad. The practice here is for a number of children to be mixed together in their field work without any person exercising control over their moral behaviour and conversation. The potato gathering takes a great number of children and women. This work affects the school attendance seriously. It keeps the children away from harvest to November, and then the parents do not send them till after Christmas.

193. *Mr. James Newman*, master of the Long Sutton Free School and registrar of births and deaths for the Long Sutton district.—Children are employed in gangs in this parish, principally for twitching, weeding, and gathering potatoes. During the last year the boys have been kept away from school in field work more than in any previous year. There have been an unusual quantity employed in gathering potatoes. Quite little children have got 10*d.* a day. There are no regular gangers. The gangers are labourers on the farm on which the children work. Child labour is unquestionably employed more now than formerly. The last volume of the Register of Births for this district shows that there have been 415 births between March 1864 and December 1865. Of these, 25 births were illegitimate.

194. *Miss Susanna Pinches*, mistress of the National girls' school, Long Sutton.—I have been for 8 years mistress of this school. During that time the number of girls on the books has been nearly trebled. In the winter time the attendance is about 80. In the potato picking time the attendance was as low as 40. The rest of the children left for work, either picking potatoes or gathering beetroot. In the months of May and June the attendance was much the same as in the winter months. During March and April only a few left for work.

195. *Mr. John Clarke*, Long Sutton.—I have resided and farmed in this parish for 40 years. During this time the arable land in the parish has been increased by the breaking up of pasture. The farms average 300 acres. Children are employed at weeding corn during the months of April and May and June. They work with spuds or hoes under the management of one of our own men. We attempt as much as possible to carry out the rule that boys and girls should not work together. Women are employed to weed when the farmer cannot get boys. Boys come to work at 6½. Girls and women come at 7½. The boys work to 5½ and the girls and women only work to 5. I have about 15 boys on my land during the summer months. Their wages are from 6*d.* to 9*d.* They would be from 9 to 13 years old. Girls are not employed so much in weeding corn, as on other work, because of the wet. During the last 10 years many cottages have been built on different farms in this parish, and the labourers are better distributed than they were. In Holbeach there is a large tract of land near the sea very much in want of cottages. It is cultivated by labourers who live three miles off. There has been a great quantity of potatoes grown in this neighbourhood this last year. As many as 500 acres were potatoes. Children are not employed to any great extent here during harvest. They are all gleaning. Children are employed in gathering mangold wurzel. The farmers in this neighbourhood have seldom more than two servants in their houses. Their labourers are chiefly married men, living in cottages. There is still a great want of cottages on many farms. Farmers are always willing to pay an ample interest to the landlord for cottage accommodation. I object strongly to the mixing boys and girls in field work. I saw the evil of it in one case some time back. I came upon a gang of boys and girls when they were off work at dinner time. The ganger was away. The boys had been bathing, and I saw four of the boys quite naked running about among the girls. We had a regular ganger here 25 years ago. Since that we have had no regular gangers. Children begin to work at 8 years of age. I will not have them under 10. It is 10 years since potatoes have been grown in such quantities as this year.

The crowding of cottages is the great evil of this district. The mixing of the sexes in the sleeping rooms leads to much of the immodest behaviour and conduct that is seen in the field.

Nearly all farmers here have gangs of some kind with a man to look over them. In most cases the farmers select a man likely to control their behaviour as well as to keep them at work. In some cases they are men who by no means set a good example, either in their language or their conduct.

TYDD ST. MARY, pop. 985. 196. *Extracts from the return sent to the Commission by the Rev. Henry Mackenzie, Rector of Tydd St. Mary.*

(1.) The gang system in its worst form (that of professional gangers farming the children's labour) does not exist here, but mixed gangs varying in number are frequently employed.

(2.) Probably about one-sixth or one-seventh of the population are thus employed occasionally in the course of the year.

(8.) Treatment of workers.—No complaint on this head; they are said to be as independent as their masters.

(9.) The sexes work together.

(10.) Influence of employment on physical condition.—It is supposed to encourage hardihood, but I think it makes them old before their time.

(11.) State of education.—Decidedly low, but bearing fair comparison with adjoining parishes.

(12.) Moral condition.—Very bad indeed; bastardy painfully frequent.

(13.) The gang system, even in the modified form exhibited above, acts as a blight and a curse to the parish. I see no objection to it for men and boys; but for women it is degrading, and for girls morally destructive. The women who go to field-work rarely manage their houses well, or make their homes comfortable to their husbands. The girls are depraved in

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early life, and grow up coarse, and bold, and corrupt. I am credibly informed that the language used in the mixed gangs of boys and girls, going to and from labour, is of the most filthy and horrible description. One who has often worked with them has told me that "He would rather see his girls go into the workhouse "than to field work;" and that "He is the biggest "hero among them who can tell the biggest lie, and "swear the biggest oath." Girls have thus not merely their ears polluted and their tastes depraved, but their hands are spoilt for domestic work, their sense of modesty destroyed by the offices of nature being performed openly, and they grow up fond of the wild and reckless freedom of the fields, and utterly unsuited either for service in the house of a mistress, or for the proper management of a house of their own.

It is by no means to be inferred that the evils of the gang system are limited to those places where professional gangers are employed. They exist wherever women are employed; and they exist in a worse form where girls are employed, and in a worse form still where girls and boys are allowed to work in a mixed gang; though in the worst form of all when this is permitted under the irresponsible management of professional gangers.

The *causes* of the gang system are, the comparative cheapness of female and child labour; and of the *professional* gang system, the want of cottages on the wide spread farms, which creates the necessity of *collecting* the children in one place by preconcerted arrangement.

The *effects* of the employment of *women* in field-work are:—1. Loss of self-respect, and dirty and degraded habits. 2. Slovenly and slatternly households. 3. Alienation of husbands by the discomforts of home. 4. Neglect of the education of children. 5. Drinking habits among the men, and opium consumption among the women.

The effects of the employment of *girls* in gang field work are:—1. Boldness. 2. Ignorance. 3. Unchastity. 4. Want of cleanliness in work and person. 5. Incompetence in sewing, mending, cooking, and all that pertains to household economy. 6. Indifference to parental control. 7. Unwillingness to apply themselves to any *regular* mode of gaining a livelihood.

Girls who have up to a certain time made good progress at school are materially injured in morals, discipline, knowledge, and regularity, by going for two or three weeks to work in the fields.

It will be a blessing to this neighbourhood if field work for girls under age can be *prohibited*. This in a few years would abolish field work for women altogether. They would be physically unequal to it in after life if not habituated to it in girlhood.

197. *Mr. Henry Cole Bailey*, farmer and owner.—The children are principally employed in this parish in setting and taking up potatoes and weeding corn. All good farmers have a few hands to weed after hoeing, particularly horse-hoeing. Women hoe sometimes with their husbands. We have no common gangs here, but we all employ women and children under one of our own men or foreman as a ganger. He works with them and looks after them. My farm is 200 acres. I should have six or eight at work. The number of a gang about here would be 13 or 14 up to 20. We could get some of the work done by men, but we should have to pay three times as much for it.

198. *Mrs. Francis Dack*, labourer's wife.—I have had seven children of my own, and I have also brought up two nephews. I had four girls and three boys. My husband was a regular farm labourer. Now he gets 10*s.* a week. He is 75. He works on the road. Farm labourers get 11*s.* here. We used to have 11*s.* and house-rent free, which was as good as 13*s.* a week. We pay 4*l.* a year for our house now. I got all my girls into service. The first girl went out at 13 years of age. She got nothing for the first year. The second year she got 3*l.* My second girl was 14 when she first went out. She got 25*s.* the first year and some cast-off clothes. The younger girls go to service the better if the mistress looks after them. Al parents like to have their girls go to service. I think that when there is a large family of girls they must go out to work before they go to service. I never let my girls go in a gang. I took my girls with me always. I do not think that it is right that girls should go in a gang with boys and men. It is not fit for girls to have to work all day with them. When I worked I used to hoe corn, weed, pull twitch. It is much better for girls on some farms than others.

199. *Mrs. Thomas Gostelo*, labourer's wife, Tydd Gowt.—I have had six children to bring up; four girls and two boys. My eldest girl is now 24 years old. She first went to service when she was 15. I kept her at home because I wanted her help. My husband was a butcher then. My husband now gets work as he can. He had none last week. He was not brought up to field work. My second girl went out at 14. Before she went to service she worked in the fields. She was 12 when she first worked on Mr. Kilham's farm under Mr. Rant. Mr. Kilham has several different gangers. Sometimes a woman went with the girls. They get 6*d.* and 7*d.* a day. It was very seldom that she got a full week's work. She used to go as soon as weeding began, about May. After gleaning she went out potato picking with me. No ganger goes with the women and girls at potato picking. I think it is a very wrong thing for girls and women to go out. There would be more work for the men if they did not go. It is a bad thing for their homes. My husband gets 3*s.* a day when he does work. My son gets 11*s.* for a full week. I have just got another girl, before she was 13 at Mr. Roper's, the baker's. She gets a little wage now. She is to have 30*s.* for this next year. She could get 8*d.* or 9*d.* a day at potato picking time. She might get nearly 4*s.* a week for six months if I kept her at home. Field work is very bad for girls; they hear such bad language among 20 to 30 boys and men all together. The boys are generally between 12 and 14, but there are older boys among them. The girls begin at 11, but there are always some older girls among them; girls who have never been to service, or have been and come away. It is no credit to the girls keeping in the fields. The gangers sometimes try to check the talking when they are at work. Cottages are 4*l.* a year with 12 yards of garden. The farmers always pay the children about here. I have seen great gangs from Wisbeach working about here. They were all boys. I think it would be a good thing if girls were not allowed to go out at all; but then their fathers must be in work.

200. *Mrs. Balls*, labourer's wife.—I have had nine children to bring up. I have got three girls into service at 12 years of age. One went to a farmer. The first year she only got her victuals, no clothes or wages. She assisted in the house. The second year she got 30*s.*, and the third year 3*l.* The second went to a carpenter's. She was nearly 13 years old. She got 30*s.* the first year. The third year she got 3*l.* The third first went to a farmer. She got 6*d.* a week wages, and in the second year she got 3*l.* I have to pay 4*l.* 10*s.* rent. I have to maintain myself and six children now. My husband is away. I think it is a very bad thing for girls to go to work in the fields. There is nothing like getting them into service in good time and keeping them from the fields. It is the ruin of a good many, I believe. I have a little boy of 13. He gets 9*d.* a day. I can get work myself, weeding, hoeing, potato picking, and setting potatoes in the spring. My little girl has worked with me. Mr. Wilkinson goes with children. He is a pleasant man. Some use low bad language with the children.

GEDNEY DROVE END, pop. 800. 201. *The Rev. W. Patchall*, incumbent.—Our population is about 800, and acreage 5,040. Of the population 500 are scattered about the farms, and 300 are in the village. The farms are large, generally from 400 to 700 acres. This year the gang system has been practised here to a much greater extent than previously. Farmers let potato gathering to three men; one of these men has no character at all. It is quite common for farmers to employ gangs of their own under one of their own labourers. As a rule these men exercise no control whatever over the behaviour of the children. These private gangs consist of from 12 to 20 children. I can say, on reliable authority, that these children are not always well-treated when employed by farmers under their own men. I was told of one case the other day, when two sisters, the one 7, and the other 8 years of age, were working under the foreman of a farm; they were picking twitch for 3*d.* a day with other children. When these children lagged or talked the man hit them with a strap which he wore round his waist. After a few days the little girl of 7 was sent home with the character of being lazy and good for nothing. The field work has of course a bad effect on the children who attend school when not at work. The schoolmaster always finds that it makes them disorderly. Children get about 3*s.* a week. Girls of 7 years of age get 2*s.* 3*d.* for a whole week. Wages are now 2*s.* 3*d.* a day for good labourers; they used to be 2*s.* The wages have been raised this year and the gang system has been introduced too. The lowest cottage rent is 4*l.*

CROWLAND, pop. 3,148. 202. *James Hill*, parish clerk.—I have been 40 years sexton of this parish. There has been a slight decrease in the population in the last few years. Cottage rent is high. There are very few cottages in the town under 4*l.* The people are all labourers and farmers. The farms are generally about 300 or 400 acres; only a few farms are above 400 acres. Women and children have always been in the habit of working in the fields. The wages of day labourers are 2*s.* a day; some only have 1*s.* 8*d.* a day. Women's wages are 1*s.* a day; children's wages, 6*d.* Children were not employed so much 30 years back as they have been lately. Undoubtedly much of the work now done by children in gangs used to be done by men and women. More men are out of work now where children and women are employed than formerly. Weeding and twitching used to be more done by men. There were no such things as gangs of children 30 years back. The evil of the ganging is that girls and boys go about in great numbers without any control on their conduct. The gangmasters are not men to keep them in order. I never heard of any particular scandal connected with any ganger. The farmers some time ago had a meeting, and agreed to keep the boys and girls separate; but the old practice of mixing them prevails now. I know that gangs from this town go to Thorney fen; that is six miles off; they go three and four miles round in a regular way.

203. *Mrs. Pycroft*, wife of Francis Pycroft, gangmaster.—My husband has been in the habit of going out with children for the last 40 years; he is 73 years old now; he takes girls and boys together; he has from 50 to 60 children; he does not often take them all together; he sends them out in small parties to different farmers; some have six at a time; others send for 10 or so; some like to have girls, others little boys best. The farmer sends one of his own men to look after them. Sometimes he takes them all himself, and then the farmer's man goes with him; he works for different farmers. When he sends children out the farmers only pay him the wages of the children. The children are paid 6*d.* a day, big and little. The farmer would send us 5*s.* for 10 children. My husband gets nothing for himself, except, perhaps, a penny or so from some of the parents, or a Christmas box from the farmers. My husband is very strict with the children; he separates the girls and boys. After harvest he gets work, twitching, pulling up mangolds, and weeding coleseed. There is only one other ganger in the town; he has a gang of boys. The farmers have gangs of their own. The children go out at 8 and 9 years of age. There are none out now of 6 or 7 years of age.

204. *Mr. T. Byworth*, manager of the Osier factory.—I manage this work for a cotton manufacturer at Manchester. I employ about 20 to 30 men to cut and trim the osiers during the months of February, March, and April. From the 18th of April to about the 20th of June I employ from 100 to 120 women and children to peel the rods. The women at the "breaks" are paid 5*d.* a bunch of rods; they employ their children to pull off the peal. Some women have two and three little girls to help them. Some children as young as 5 years of age help their mothers; they come at 8, and leave off at 5; they don't work on wet days. Some women can earn as much as 1*s.* 8*d.* in a day. The earnings of the whole average 18*l.* per week. There are 70 "breaks." It is very nice work for women; it is close to their homes, and only women and little children are employed at it; it is much better work for the girls than the fields; they were wonderfully pleased when it was first started. I am getting them into order now. I have a bell which is always rung when any scolding or blackguarding is heard. The women who do it are then fined 1*d.* Some seasons back I got as much as 10*s.* or 12*s.* by fines. This year I have only got 6*d.* They were very bad at first. The fines are kept for a tea drinking at the end of the season. We shall make up the sum for the tea, whether we have enough fines or not. I find that the girls who have been in the fields are worse than the others. There is a great deal of poverty in this town, particularly in the winter time. There are no rich people in the place. I farm about 80 acres myself. I can't afford to keep a servant. There are very few persons in the town who have servants.

205. *Mr. William Blood*, farmer.—Large gangs are not so much used by farmers now as they were. The common practice is to send to one of the two gangers for a few children, half a dozen or a dozen, and then to put a labourer over them. The ganger is paid 6*d.* a head, large and small. The ganger takes out himself sometimes a dozen, sometimes as many as 40; he is then paid 2*s.* 6*d.* a day. There was an attempt made about eight or nine years ago to keep the sexes separate; they were separated for some time. A farmer of the name of Baine, who is now dead, undertook to manage it. The same two men were gangers that are now. The boys and girls were separated at meals. There used to be as many as 80 in a gang; they would come home shouting about the street. The land just round this town, about 3,000 or 4,000 acres, is generally cropped every year; this land is owned by small occupiers. Most of the labourers employed on the farms in the parish reside in the town; very few live on the farms. The furthest farms on which these labourers work are about two miles and a half from the town. There are about 22 persons in the parish, principally farmers, who keep two servants. There are only five traders in the town who are keeping two servants this year. Several persons have one servant, a little girl of 12 to 14 years of age. The elder servants are all from other parishes; it is better to have them from another parish. Our poor rate has generally been 10*d.* for the half year.

COWBIT, pop. 649. 206. *The Rev. J. T. Dove.*—There are gangers or gangs in this parish. Gangs from Spalding pass through in the summer season for twitching and weeding; they go to Peak Hill and to Weston. Peak Hill is five miles from Spalding. I have seen these gangs passing, and observed the rude and wild behaviour of the children. I have seen children as young as 10, and others of 16 or 17; they all walk to and from their work. I never heard of their being sent for by the farmer. The children of my own parish never join in these gangs; they work in the fields, and do the same kind of work, but in a different way; they work two to four together; never in large numbers. The farmers in this parish are small occupiers and freeholders, and generally go themselves with the children or women. I do not consider that any particular evils result from this system beyond the interference with school work occasioned by the field work. At this time of year (May) my school is

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comparatively speaking, empty. In the winter the children come well. The girls go out to service at about 16 or 17 years of age. The people in this parish are very much connected with each other. Persons working together in a field are probably all related to each other.

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Northborough, pop. 240. 207. *John Wyke*, gardener and parish clerk.—I have resided in this parish for 60 years and more. It is about one mile and a half from Deeping St. James. I have very seldom seen a gang in this parish. Newborough is two miles from here. A gang from Newborough sometimes comes into this parish. No girls join this gang from this parish. The farmers, generally speaking, do not weed their crops at all. They hoe all their crops either by hand hoe or by the horse hoe. Hoeing is generally done by the day here. Wages are 2*s*. a day.

Glinton, pop. 421. 208. *Mr. Samuel Vergette*, farmer.—There are no gangs of children belonging to this parish employed, but gangs from Newboro' and Hilpstone are occasionally employed. I have myself employed one from Newboro'. I don't employ them regularly. I should have them if I was pressed with my weeding. As a rule, the cropping in this parish is both hoed and weeded. Horse hoes are used by some farmers. The weeding is done after the hoeing by women and boys. I have now six boys and a man weeding. Men weed as well as boys. Crops need not always be both hoed and weeded. Sometimes a crop is only weeded, and sometimes only hoed. It is the custom to let turnip hoeing by the acre, and then the man generally employs a child to single along with him. This is not the custom with corn crops. When the horse hoe si used the weeds in the drills cannot be touched. In hand hoeing the man can hoe out some of the weeds in the drills. We have no twitch picking here. We are generally able to get the twitch off by raking when getting our potatoes in the autumn. This is done by men and women. Harvest work is done by the piece. Hoeing is sometimes done by the piece. Ditching and draining are always done by the piece. In the winter labourers are employed at dyking, draining, hedging, threshing, winnowing. There is also getting up mangolds and turnips; this is sometimes done by a gang. Our women will not work. I have tried to get women this year at 1*s*. a day for weeding, and could not get them. Children can be got at 6*d*. or 8*d*., boys of 12 to 15 at 7*d*. to 1*s*. The fen land certainly requires more weeding than the high land. Labourers are more regularly employed here than in the fens. I know myself of one farmer in the fens who is in the habit of paying off his labourers about the middle of November. There are men in this parish who go into the fens for work, harvesting and getting up roots, and then come back here in the winter and get what work they can here.

Paston, pop. 1,071. 209. *Extracts from the return sent to the Commission by the Rev. James Beecheno, Curate of Paston.*

(1.) One small gang is employed in this parish.

(2.) Number of persons employed.—15.

(3.) Age of workers.—Between 7 and 13.

(4.) Kinds of work.—Weeding in spring; taking up root crops in autumn.

(9.) The sexes work apart.

(13.) The system here seems gradually declining. It used some years ago to be about 40. For several years past the number has only been about 24 to 30, and now numbers as stated.

One would think that the system can scarcely be other than prejudicial to education and morals; yet I am bound to say that I have not observed anything particularly censurable in the conduct of our children employed; in the matter of education the children must suffer more or less from absence from school.

Yet, again, in the inspection of schools, about 12 in number, in this deanery (Peterborough), only one master complained to me of the bad results of the system, the fact being proved by the number on the books being *more than twice* the average attendance, and about three times the number presentable to the Government inspector.

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Yaxley, pop. 1,411. 210. *Extracts from the return sent to the Commission by the Rev. C. Lee, Vicar of Yaxley.*

(1.) There are four gangs conducted by the following persons,—Linton, May, Marshall, Lewis.

(2.) Number of persons employed on the 14th day of May 1866.—At present 161. Last year, about 200.

(3.) Ages of persons employed—

	Male.	Female.
Under 7 years of age -	2	3
Between 7 and 13 „ -	55	26
Between 13 and 18 „ -	40	25
Over 18 (unmarried) -	—	10

(5.) They go to work from one to seven or eight miles.

(6.) Hours of work.—They usually start at 7 a.m. Their return depends on the distance. When their farm is far from home they have often slept in a barn belonging to the employer.

(8.) Treatment.—At times very badly. Often beaten.

(9.) The sexes work together.

(10.) Influence of employment on the physical condition.—Decidedly injurious to many, causing colds, coughs, and often terminating in consumption.

(11.) State of education.—Very defective, though there is an excellent endowed school free to all on payment of a penny.

(12.) Moral condition.—Worse still.

(13.) The gang system is the most ruinous that ever could have been adopted; detrimental to all morality, virtue, and sense of religious feelings (the language of the greater number of them being of the most offensive nature), and in the next generation must prove injurious to any parish when such a system has been adopted.

Many of the farmers have what are called small gangs conducted by some of their own labourers.

211. *Mr. John Bird*, farmer.—Gangs are largely employed in this parish. The children in this parish are also taken out to neighbouring parishes. They are often employed in the Overtons, three miles off. The land in Overton is high land, not fen. The gangs are employed by large farmers. I think the gangs are employed there because there is a want of labour in those parishes. This parish is an open parish. My son has a large farm and employs a gang of his own. He has only boys, about 15 or 16 of them. He always

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employs the same ganger. He does not work for any other farmer. The children go very long distances sometimes. I met a little girl the other day on the road from Peterboro'. She was lame ; about 10 years old. She had been working at Woodson. She lived at Stilton, about six miles off. I gave her a lift. There are three or four gangers in Yaxley who travel about with gangs. I wish the common gangs were put an end to. It is very bad that the little children should go to work so far. The custom here is to pay the ganger so much per score, generally 15*s.* per score. The ganger gets 2*d.* a day out of each child's wages. He has no other wages. The ganger does not often take the work. Weeding and hoeing are both done by the day. In the fen about here the men are generally employed by the piece ; they do more work and earn more wages, and both men and farmers are better satisfied. Wages here are 2*s.* a day ; the better men earn more. At piecework the men earn 2*s.* 6*d.* a day. Nearly all the work is put out except ploughing and other home work. The evil of the gang work is that it keeps the girls out of service. This parish is very quiet ; there are five chapels in it besides the church. There is evening service in one or other of the chapels every day of the week except Saturday, and the men are in the habit of going to them after their work. There is no necessity for mixed gangs. I think some good might come from licensing the men.

FARCET, pop. 778. 212. *Mr. Samuel Bradford.*—There used to be two gangers in this parish ; this year there are none I believe. Many farmers employ children and women for weeding under their own labourers. I never employ a gang of any kind. I have a horse hoe. There are four horse hoes in the parish. The horse hoe can hoe 10 acres of either beans, peas, or wheat in a day. It injures the corn less than the hand hoe. I should have three women to weed the drills after the hoe. I farm only 180 acres now. Four men and three women are quite enough for this quantity of land. I should never want a gang.

213. *Mr. George Little.*—I farm about 500 acres. Most of my farm is fen land. I have no gang. I have not employed any gang this year. I use the horse hoe. I should employ my own labourers for weeding. I may have a gang for about a week. I don't like them. I had one last year. The snatch hoe is also used a good deal here. A man can do twice the work with that. This has helped to do away with the gangs. I should employ the children, if I had any, under one of my own labourers. The children's wages would average 7*d.* a day. We have no surplus labour. Wages are 12*s.* a week through the winter.

214. *William Bent,* labourer.—I can do three acres a day with the snatch hoe. With the common noe I could only do three roods, or perhaps an acre in a day. I work by the day. I have 12*s.* a week. I always leave off about 5 instead of working to 6. I reckon two acres and a half a good day's work. I should work longer if I was paid more.

215. *William Williamson,* labourer.—I have worked for Mr. Bird as ganger for eight years. For the last four years I have only had boys. I have now 20 boys in the gang. The eldest boy is 15 years old. He has 1*s.* a day. The youngest has 6*d.* I begin hoeing in April. We work up to the end of June. We weed oats last. I think that the boys and girls ought to be in different gangs. It would be difficult for the travelling gangers to manage this ; they would have to divide their gangs and send another man with the girls.

STILTON, pop. 724. 216. *Extracts from the return and other communications sent to the Commission by the Rev. T. Hutton, Vicar of Stilton.*

(1.) Two of the farmers occasionally employ gangs belonging to a neighbouring parish (Yaxley) which are formed to some extent of Stilton children.

(2.) Number of persons employed.—About 40 ; 21 girls and 19 boys. The numbers vary from 10 to 40.

(3.) Ages of workers—

	Males.	Females.
Under 7 years of age -	4	1
Between 7 and 13 - -	10	12
Between 13 and 18 - -	5	5
Over 18 - -	—	3 unmarried. 6 married.

(6.) Hours of work.—From 7 and 8 a.m. to 5 p.m. When they go long distances they have to start as early as 5 a.m., and they do not get home till between 7 and 8 p.m.

(7.) Time allowed for meals.—Half an hour for lunch, at 10 a.m., and one hour for dinner.

(8.) Treatment.—Often very harsh. The younger children are frequently beaten with a stick to make them keep up with the rest.

(9.) The sexes generally work together, but sometimes apart.

(10.) Influence of employment on physical condition.—They are often subjected to attacks of rheumatism from constantly getting wet. The little girls especially are frequently wet from having to foot with the dewy grass and corn.

(11.) State of education.—Very low.

(12.) Moral condition.—Very bad ; a sad want of modesty and self-respect, especially among the girls and young women.

(13.) The whole system is essentially corrupting and demoralising. It makes the girls so rude, rough, and coarse, that they are neither qualified for domestic service nor willing to submit to its restraints. I have frequently noticed a marked change for the worse in the conduct of girls from the first month of their joining the gang. Mixed gangs are ruinous to the girls. I cannot conceive a system more calculated to destroy all sense of modesty and propriety of conduct. Instances of juvenile prostitution and immorality occur in connexion with the gangs that are a scandal and disgrace to a Christian country.

Number and ages of children on the books of Stilton school who were employed in gangs in the summer of 1864—

	Males.	Females.
Under 6 years of age - -	4	1
" 7 " - -	1	1
" 8 " - -	1	2
" 9 " - -	3	2
" 10 " - -	1	3
Above 10 " - -	1	3

Number and ages of children on the books of Stilton school, who were employed in gangs in the summer of 1865—

	Males.	Females.
Under 6 years of age - -	1	0
" 7 " - -	0	0
" 8 " - -	7	1
" 9 " - -	1	3
" 10 " - -	4	2
Above 10 " - -	3	5

216A. *Statement of Mrs. Anthony Adams, labourer's wife, of Denton, Huntingdonshire.*

"In June 1862, my daughters, Harriet and Sarah, aged respectively 11 and 13 years, were engaged by a ganger to work on Mr. Worman's land at Stilton. When they got there, he took them to Peterborough ; there they worked for six weeks, going and returning each day. The distance each way is 8 miles, so that they had to walk 16 miles each day, on all the six working days of the week, besides working in the field from 8 to 5 or 5½ in the afternoon. They used to start from home at 5 in the morning, and seldom got back before 9. They worked at first on Mr. Wyman's farm, close to the "Peacock" inn, as you enter in for Peterborough, and afterwards they worked at Stanground. Sometimes they were put to hoeing, sometimes to twitching, and they had 7*d.* a day. They had to find all their own meals, as well as their own tools (such as hoes). They (the girls) were good for nothing at the end of the six weeks. They were very

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quick to work, and the ganger never gave them the stick.

"I never heard of his treating them with any impropriety. It was a mixed gang, but the boys were not very big. The ganger made a great fuss to have my children, because they were so quick in their work, and he persuaded me to send my little girl Susan, who was then 6 years of age. She walked all the way (8 miles) to Peterborough to her work, and worked from 8 to 5½ and received 4*d.* She was that tired that her sisters had to carry her the best part of the way home—8 miles, and she was ill from it for three weeks, and never went again.

"The gangs use dreadful language; they are not fit to be met on the roads by any respectable people. They will insult anyone, and swear and behave 'ondecent.'"

Overton Longville, pop. 311. 217. *Mr. Henry Hetley.* — I farm 400 acres in this parish. I am obliged to employ a gang for weeding and hoeing during the spring and summer. I always have the same ganger from Yaxley. I have generally about 15 children. I prefer girls. None of the children in this parish work in the fields. They all go to school. The population is very small in proportion to the want of labourers in the parish. The labourers are always in full work. The wages are now 12*s.* a week. Some earn 15*s.* or 16*s.* a week at piecework. I pay 14*s.* a score for children; that includes the ganger's own pay. Sometimes I let the work out. After harvest there are mangold and turnips to be got up, and I want the gangs for shovelling manure. I have three or four women or girls at work during the winter. My farm is high land. It is farmed on the four-course system.

218. *Mr. William Hetley.*—I farm about 500 acres in this parish. I have only one man out of this parish. My labourers live in Yaxley; that is about one mile and a half from my farm. I employ a gang from Yaxley for hoeing and weeding. I principally let the work to the ganger. If I wanted a boy to tent sheep I should have to hire him of the ganger. I should pay 8*d.* a day. I believe that every child in Yaxley is in a gang. Some of the farmers in Yaxley have small gangs of their own. To show how valuable the children are, I will tell you that I have just been told by my ganger that 40 children have left his gang for another man. They have been promised employment up to harvest at 14*d.* a day. They are girls and boys of 13 years old and upwards. They are now gone to work at Haddon, a small parish near here. The land is a strong clay. I think that the girls and boys should be kept separate. In this parish the women and girls will not go out. The girls stay at home and do nothing. There are seven or eight girls of 17 or 18 years of age at home now doing nothing. In the neighbouring parish of Cherry Overton the women do work in the fields. There are 23 women out now.

Holme, pop. 641. 219. *Extracts from the return sent to the Commission by W. Wells, Esq.*

I have noticed within the last year or two that there are not so many lads of between the ages of 13 and 16 as there used to be. These now find more individual employment than they formerly did, and one element of mischief in the gangs seems to me to have diminished. Great evils remain, however. Sets of workers composed sometimes of girls full-grown alone, and sometimes with a mixture of little children, go out under the care of gang masters, and abuses, occasionally even attracting public notice by being recorded in the local papers, not unfrequently occur. The little children, instead of being brought up from infancy under the improving influence of school habits and teaching, spend the whole live-long day for seven months in the year, without their thoughts or intellects being ever guided in any good or worthy direction, and too often in listening to and learning to join in conversation of a lowering and degrading kind.

Assuming that for the somewhat peculiar cultivation of the fen, for the efficient weeding of which, for instance, it is affirmed that no process carried out by implements, nothing, in short, but the actual pulling out of the weeds by hand, will suffice, the employment of children in gangs is necessary, two safeguards suggest themselves for the protection of the children so employed: the one to ensure them against ill-treatment, and the evil example of a badly conducted gang; the other against their being deprived in their childhood of a proper amount of school education.

To meet the first case, I would make it necessary for all gang masters to hold something in the nature of a certificate or license from a magistrate, revocable on misbehaviour.

To meet the second case, I would specify an age before which it would be illegal for children to work in gangs; and I would also lay down some regulation by which a gangmaster should be open to a fine if he employed any child with whom he did not receive on its coming to work a ticket, which he should be liable to produce if called on to do so, certifying that the child had attended school a certain number of hours per day, week, or month previously up to each time of its coming to work.

Warboys, pop. 1,911. 220. *Extracts from the return sent to the Commission by the Rev. W. Finch, of Warboys.*

(1.) Each large farmer has a gang of weeders, and an old man to go with them. There are ten such gangs, and three other gangs of 20 children, called job gangs, working for small farmers.

(2.) Ages of persons employed on the 1st day of May, 1866:—

	Males.	Females.
Under 7 - -	0 - -	0
Between 7 and 13 -	50 - -	80
Between 13 and 18	0 - -	70
Over 18 - -	0 - -	40 unmarried 30 married.
	50	220

(5.) They go to work from one to five miles.

(6.) Hours of work.—They start at 7 a.m., and return home by 6 p.m.

(8.) Treatment.—Kind, when a respectable man is with them.

(9.) The sexes work together.

(13.) The gang system is objectionable in every way. If children were employed half days, I believe the farmers would get as much work out of them, and they might continue to attend school.

221. *Mr. Thomas Ekins*, Pope's Lane Farm.—Our parish consists principally of arable land, a large portion of which lies towards Chatteris. The distance from here to Chatteris is about nine miles. There are 13 gangs at work in this parish; 10 of these gangs are private, the other three gangs are large "job" gangs under common gangers. These gangs are chiefly employed by the smaller farmers, *i.e.*, by farmers who have not land enough to keep a gang at regular work. A farmer of 300 acres could keep a gang of seven women and children during the months of April, May, and June. I have a gang of about this number. I farm 500 acres. In October and November they would be employed again to take up mangold and carrots, and to twitch. In the gangs now at work there are 210 women and children and 50 boys. The boys are all under 13 years of age. Of the females there are 80 girls between 7 and 13 years of age, 70 girls between 13 and 18, and 40 young women unmarried over 18, and 30 married women. These gangs are employed around the village to the distance of not more than one mile to the south towards Huntingdon, and to the distance of four or five miles in the fen towards Chatteris. The furthest place they go to is Gant fen, between five and six miles off, and within two miles of Chatteris station. The job gang consists principally of small children; there are few girls in it above 13 or 14 years of age. I cannot say much for the gangers; generally they are labourers who have no regular masters. The system here is for the ganger to take about a score of children with him, and to charge the

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farmer about 6*d.* or 7*d.* a head. He gets about ¼*d.* per day from each hand, and charges the farmer 1*s.* 8*d.* per day for his own wages. The common gang system is new here. About five years back there was only one gang; now there are three. The system was commenced by an old man who had learnt at Chatteris that he could get 10*s.* a week as ganger, and besides that make about two or three shillings more out of the children. He went round to farmers, principally the smaller men, and engaged to do their weeding for them. The gangers generally have their work laid for them for about a week or 10 days forward. The ganger generally agrees with a farmer to weed his wheat or other crop once or twice, as it may be, before the middle of June. The evil of the job gang system is that it encourages too much independence among the children; it separates them from any particular employer, and breeds a lawless behaviour. We cannot get servants out of this parish; we have to go to the high lands, where field work is not so much in vogue. Men's wages here are now 1*s.* 8*d.* to 1*s.* 10*d.* a day; girls of 15 and upwards get 8*d.* a day; the smaller children get 5*d.* or 6*d.* a day. Hoeing is generally done by men. The fen land about here is weeded and not hoed at all. The objection to hoeing this land is that it is a light moory soil, and hoeing would let the frost or sun in too much. The land in the fens about Ramsey and Chatteris is a heavier soil. We never employ men to weed here, nor boys above 13 years of age. Women are employed to knock manure. However far the job gangs have to go they start at the same time and return home at the same time; the loss is to the farmer. Very little work is let out to the gangers here. I have thought that much of the evil of the gang system might be remedied by making it necessary that the gangers should be licensed by the Board of Guardians. The persons employed by farmers to look after their own gangs might be required to have a certificate of fitness as well as the others. No children under 7 years of age go now; but I think that 9 years of age would be quite low enough, or even 10 years of age. It would be also a good plan to keep the gangs to small children. The gangs are not employed in the upland to the south and west because it is strong clay land. There are few roots grown on this land. The land is hoed, and very little weeding is done. The twitch, instead of being picked out by children, is destroyed in the fallows, and the land is fallowed every fourth year. In the fens the land never lies fallow longer than from Christmas to July, while the high land lies to October. The men are employed on the piecework system for hoeing, filling and spreading manure, claying, dikeing, &c. The day wages during harvest are 24*s.* a week for four weeks, and 15*s.* a week for two weeks. But most of the harvest work is piecework, and the men generally earn as much as 30*s.* for about three or four weeks in this way. Strong men earn 15*s.* a week at claying. They can also earn 15*s.* a week at thatching.

[The next four children I questioned in the National school.]

222. *Martha Deighton.*—I was 12 last March. I worked under Mr. Pell four weeks on Mr. Ekins' farm. There were 12 others with me. We were working in the fen about three miles from here. I left home at 7 in the morning, and got back at 6 at night. I stopped half an hour for lunch at 10, and an hour at 1 for dinner. The gang were boys and girls. The two oldest were grown-up girls. The boys were little ones. I got 6*d.* Last year I worked for half the year. I worked once at Gant fen. I went there two days running. I twitched. There were about 20 of us altogether. They were all little ones. There were three girls younger than me. It was in November when we worked there. Some of us cried for cold. We started at 7 in the morning; we got home about 7 at night. We left the land about 5.

223. *John Leader.*—I am 8 years old. I shall be 9 next June. I worked last year under Mr. Marriott. I worked the year before last under Mr. Marriott. I got 4*d.* a day then. Last year I got 5*d.* I got only 5*d.* this year. I have been hit once for stopping behind. I worked at Gant fen last year with Martha Deighton. Father is a bricklayer's labourer. I have seven brothers and sisters. There are three girls older than me. One goes out to service in the day time. Two go along with Mr. Marriott twitching.

224. *Walter Robins.*—I am 8 years old. I have worked this year. I have only worked one mile off. I worked for Mr. Ekins under my father. I have eight brothers and sisters. There are two older than me. I got 4*d.* a day. I twitched. There were four besides me.

225. *Joseph Dockrill.*—I shall be 9 next November. I have worked only one day this year. I worked five days last year. Father is in regular work. There are four children with me.

ELTON, pop. 940. 226. *Extracts from the return sent to the Commission by the Venerable Archdeacon Kempthorne, Rector of Elton.*

(1.) Two gangs are employed here of about ten each, consisting almost entirely of girls; employed by a labourer called the "ganger," who also sees that they work well. They are paid by the farmers.

(3.) Age of persons employed.—20 girls between 7 and 13 years of age.

(4.) Kind of work.—Hand-weeding only.

(6.) Hours of work.—From 8 a.m. to 5 p.m. (including meals) on the land. From 7.30 a.m. to 5.30 p.m., including going to and returning from work.

(8.) Treatment.—No complaints; except that the younger children suffer much from cold.

(9.) The sexes work apart.

(10.) Influence of employment on the physical condition.—To the little ones I consider it physically injurious, but not after the age of 10.

(11.) State of education.—There is an average of 35 in each of the three schools, (boys, girls, and infants), and most of the scholars at 10 can read, write, and cypher.

(12.) Moral condition.—Rather low.

(13.) The gang system was introduced into this parish within the last 15 years, and the farmers are not tenacious of it. They employ gangs, as essential at first entering on farms in a foul state. But after that they deem hoeing better than hand-weeding, and the gang system is waning. The daily wages of children in gangs is 5*d.* to 8*d.*, and is poor pay considering the great wear and tear of clothes. The immoral effects of mixed sexes arise probably from the relaxation at meals, the ganger's interest does not call for his interference then, as when they are at work.

SAWTRY, pop. 1,036. 227. *Extracts from the return sent to the Commission by the Rev. Charles Birch, Rector of Sawtry.*

(1.) There are five gangs of children, some mixed, some girls only; under a male superintendent.

(2 and 3.) Number and ages of children employed:

	Males.	Females.
Under 7 years of age	0	0
Between 7 and 13	18	54

(9.) The sexes in some instances work together. Some only employ girls.

(10.) Influence of employment on the physical condition.—They appear healthy and happy.

(11.) State of education.—Greatly neglected in consequence of the system.

(13.) I am of opinion that the gang system has an unfavourable effect upon the children. They acquire loose and independent habits, are totally unfitted for domestic service, and for the most part unwilling to return to school, even on Sunday. They lose the advantages of education, and being employed at so early an age, lose what little they have been taught. The parents are tempted by their earnings, which vary from 2*s.* to 2*s.* 6*d.* per week.

In 1841, schools were established for 150 children, and more than that number attended.

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Since the gang system commenced, the attendance is reduced by one half. Children remaining in the schools are easily trained for domestic service and turn out satisfactorily, but those employed in the fields, seldom remain in situations, and when provided with clothes and sent to them, frequently return, preferring field labour and independence. Could the girls be kept in the schools until 13 years of age, there would be a marked improvement in their moral, religious, and general condition.

Boys are employed in farm work at an early age, independently of the gangs; but it would be very desirable if they could be kept at school until 10 years old.

In these parishes the children are not ill-treated, they appear well and happy, and like their work; but I have reason to fear that this is not everywhere the case. The loss of education alone is a serious evil, not to mention the prejudicial effects of the gang system to their future prospects in life.

WISTOW, pop. 532. 228. *Extracts from the return sent to the Commission by the Rev. Thomas Woodruff, Rector of Wistow.*

(1.) The children are employed under a modified gang system. There are but two sets, whose parents receive their daily earnings; a man superintends them.

(2.) and (3.) Number and ages of persons employed—

	Males.	Females.
Under 7 years of age	0	0
Between 7 and 13 -	9	11

(4.) Kind of work.—Weeding by hand in the spring.

(6.) Hours of work.—From 7 a.m to 6 p.m.

(8.) Treatment.—Very good.

(9.) The sexes work together.

(10.) Influence of employment on the physical condition.—No injury in general, unless when the corn is wet, or weather rainy, when they take cold occasionally.

(11.) State of education.—They come to school until the weeding begins.

(12.) As to the moral condition.—I distinctly can trace much evil by the sexes being out together all day. The children now employed are not many; the labourers who superintend them are unwilling to exercise authority over them with severity, on account of the mothers who would complain if they were punished (so the gangers inform me).

The effects of these children being congregated I consider injurious to their proper behaviour; and I have reason to fear that the good manners taught at school are in a measure corrupted in the fields.

I consider that much evil would be removed by the farmers employing the boys and the girls in separate parties.

RAMSEY, pop. 3,412. 229. *Extracts from the return sent to the Commission by the Rev. C. Bingham, Incumbent of Ramsey.*

(1.) A number of young persons of both sexes are employed under a man. The number of gangs may be 8 to 10.

(3.) Ages of persons employed.—Between 7 and 14.

(8.) Treatment.—Generally with kindness.

(9.) The sexes work together for the most part.

(11.) State of education.—Many have been to school up to the time when they are employed in the gangs; but that withdraws them quite from the schools.

(12.) Moral condition.—Very bad.

(13.) The system is decidedly very prejudicial to the education and morals of both boys and girls.

RAMSEY ST. MARY, pop. 1,088. 230. *Extracts from the return sent to the Commission by the Rev. William Collins, Incumbent of Ramsey St. Mary.*

(1.) The gang system exists in my parish. There is no regular gang; but at times several temporary gangs (*i.e.* gangs brought together for some particular work). The population is very scattered, with no centre from which gang-masters could collect large numbers. The chief gang work in this parish is done by gangs from the town of Ramsey.

(9.) The sexes work together.

(10.) Influence of employment on the physical condition.—Favourable.

(11.) State of education.—Very low.

(12.) Moral condition.—Wretched.

(13.) Having had constant opportunities of watching gangs during work hours and meal times, and also on their journey homewards; having followed gang children, especially girls in their after lives; having watched to some extent the general effects of the system upon the population, it is my belief that the system, as it at present exists, lowers the moral tone of the district, but does not affect the education of the young or the health of those engaged. I consider education not affected by the gang system, as gang children, if not employed in gangs would be employed in other field labour, or in field labour on some different plan. Perhaps I ought rather to say, that the gang system does not affect education more than any other system in a district where all the land is *arable* and much hand labour is needed.

From careful personal observation I can say that the language in common use among young women, girls and boys is shocking beyond belief; that indecencies are common; that the gang masters are persons of very improper character and conduct. I do not, of course, mean in every instance, but not unfrequently. I mention one instance of a gang-master's behaviour I witnessed lately; I heard a man swearing fearfully, and on looking to see who he was, I saw a gang-master returning home with a mixed gang of women (some elderly) and children (boys and girls), he was very drunk, and held up on each side by a woman, while the children mocked, jeered, and laughed. I could multiply such cases, but it is not necessary; my wish now is to give an opinion as to the way in which (supposing the system necessary) its evils can be mitigated. I take this view:—

I. Separate the sexes.

II. Let no person be permitted to be a gang-master (*i.e.*, hire the services of a number of women, of boys and girls, and let out their services under his own superintendence to farmers needing them) without a licence from the divisional petty sessions.

Let no licence be granted unless the applicant produce certificates of character from one churchwarden, one guardian, and two other persons of repute in his parish.

In any case of misconduct let the licence be revoked.

Let the licence extend over a period not exceeding 12 months, but be renewable.

231. *Mr. D. Corney.*—I farm about 500 acres in the centre of the fen, between Ramsey and Holme. There are cottages scattered about the fen. There are nine cottages close to the land which I farm. I have 10 able-bodied labourers from these cottages; one of these men is a lodger. It is not the system about here to have any number of farm servants. From the families in these cottages I should have about four or five labourers' wives and about 10 children. The youngest child now employed on my farm is about 8 years old. I am obliged to employ other light hands besides them sometimes. Sometimes I get a few additional hands, and sometimes I get a gang from Ramsey. I should want the gang principally for weeding at this time (May). I should not want the gang after the weeding season. The light hands whom I generally employ work sometimes separately and sometimes in a gang of about 12 for weeding, under one of my own men. I think that women and children will work quite as well three or four together as in a larger number under a man. The evil of the large gangs is the bad language that goes on among them, and the mixture of the girls with the boys. There is only one single grown-up girl in my own cottages. Very few of the girls about here go to service. The wages of the children and women

employed by me are from 6*d.* to 10*d.* I sometimes have a gang from St. Mary's, and sometimes from Ramsey. The ganger charges so much per head for the children, and 2*s.* 3*d.* a day for himself. I have lately had a gang of 16. I paid 7*d.* for some and 10*d.* for others; there were five or six married women among them, and five or six boys of 10 or 11 years old, and the rest young girls. I do not think that any farmers get children from the gangers here. The ganger always goes with them. My own opinion is that the work done by the gangs can be as well done by women and children working separately. The reason why gangs are not employed on the high land is that there is no weeding done. The farmers are satisfied with hoeing their crops; there are moreover very few roots grown on the high land. We don't have gangs here to take up roots, not generally; we put it out to a man, who takes his children to help him. I have had a gang from Whittlesea, that is seven miles off. I met them half way with a waggon. I never heard of gangs stopping out over night.

232. *Mr. W. Simpson.*—I have farmed seven years in this parish. I have a small farm of 88 acres; it is all fen land. I have two regular labourers, and always work myself. Occasionally I employ more men. I have a gang three or four times in the year to weed and pick twitch. I have had two boys of 12 years of age and one woman to set potatoes, and I think I shall keep them on for weeding my wheat this year instead of hiring a gang. I pay them by the day. They work very well by themselves. The woman has 1*s.* a day, and the boys 10*d.* Women generally do not get more than 10*d.* I always pay 12*s.* a week to my men; I paid them 2*s.* a day all through the winter. Some farmers near me were paying 10*s.* when I was paying 12*s.*, and they are now only paying 11*s.* I pay higher wages because I only have two men, and I get the best men I can; besides, I am always with them, and I consider that I get more work from them by paying them better. I have been paying 2*s.* 6*d.* a day to one man for some time for trenching potatoes. I don't put them on the piece because I think they would hurry their work. I have had a gang three or four times. If I kept the two boys and the woman on my land all the summer I don't think that I should want the gang at all. It is the best way if possible to have the corn all weeded at a particular time, and this is the reason why farmers like to have large gangs to weed a field in one day. Of course all the land cannot be weeded at the proper time. All the land generally requires to be weeded at the same time; and we often have to wait a week for a gang to do work which, if we had weeders of our own, we should have got done quicker. If I keep the two boys and the woman to weed, so as to do without the gangs, I shall have to pay them regularly every week until the beginning of July.

BLUNTISHAM, pop. 1,351. 233. *The Rev. John Rumph*, rector of Bluntisham and Earith.—The gang system prevails in this parish to some extent. I am decidedly of opinion that this system is the cause of the early demoralization of the labouring class in this parish. I have myself traced the ruin of girls of 13 and 14 to the mixture of the sexes in gang work. One of the gangmasters here is a beer-house keeper. The wages of able-bodied labourers here are 10*s.* now; they have been 9*s.* There has been a superabundance of labour.

234. *Letter from Charles P. Tebbutt, Esq.*

Bluntisham, near St. Ives,
28th April 1866.

DEAR SIR,

I WAS anxious to give some consideration to the subject of your letter of the 20th ultimo before replying, and am now rather surprised to see how long it has been left unanswered. Perhaps you will kindly accept this apology.

I dare say that the reason Mr. Rumph mentioned my name to you was that at one Huntingdonshire Agricultural Society's dinner, some time since, I brought this subject forward, and strongly advised farmers not to employ travelling gangs, but to place children and young persons working for them under the care of one of their own most respectable labourers.

I must, however, explain that I have no *extensive* practical knowledge of the travelling gang system. A public-house keeper and a man most unfit to be entrusted with the care of young women and children introduced the system into the parish in which I reside, and engaged all the children he could obtain. I refused to have him on my farm, and this circumstance drew my attention to the exceedingly objectionable influences under which young people were at any rate, *sometimes* placed by the gang system. This gang was, however, broken up, and I trust will not be again organized.

Although I have thought it right to state the amount of my practical knowledge of this matter, I may add that I have often discussed the matter with farmers and others living in the fen districts were travelling gangs are common, and I shall be happy to give you the opinions I have formed from any information I have been able to obtain.

I think it must be admitted that travelling gangs are useful to farmers under certain circumstances. Otherwise the practice of forming them could hardly have arisen and become permanent. While, therefore, I should avoid them myself, I should hesitate to advise any absolute prohibition. The great points to be considered and guarded are the character of the "gangers" and the composition of the gang, and I think that the following restrictions would remove a great many evils now incident to the practice:—

1st. Provide that every man forming a gang must obtain a licence costing, say 1*s.*, from some recognized authority. This to be only obtained by the production of a certificate of respectability from the *Board of Guardians* for the union in which he resides. (This suggested source for a licence I think much better and probably more efficient than the petty sessions or than any individual.)

2nd. Provide that no beer-house keeper or innkeeper shall be a ganger.

3rd. Provide that boys beyond the age of 12 shall not be allowed to work in a gang where both sexes are employed.

4th. No girls or women over 15 or 16 years to be allowed to be employed in any gang.

Perhaps the most doubtful of these proposals is the fourth. It is proposed on account of the great harm often done by single women of loose character who join a gang and exercise a most deplorable influence.

From all I can learn in the fen districts there are some very respectable gangers and some entirely the reverse. No doubt the results of the system will vary according to the character of the men by whom it is worked.

As to the general question of the employment of young children on farms I hesitate to give an opinion. There can be no doubt that children are often employed too young, and I think perhaps 9 years ought to be the standard. Still it is a difficult matter to decide, and I do not feel I have the materials to enable me to form a decided opinion. I have often wished some plan for half-day work could be devised, by which children could be half the day at work and half at school.

Yours, &c.
F. D. Longe, Esq. CHAS. P. TEBBUTT.

SOMERSHAM, pop. 1,621. 235. *The Rev. W. H. Pinnock*, LL.D., rector.—There are now three gangs employed in this parish; they are not so large as they were; there are only about 10 or 12 in each; there used to be 30 or 40 in each gang. Our population has been diminished by labourers taking themselves and their families to the manufacturing districts and to London. The better people go first. The wages are low in this parish. I think the cause of this is that the farmers, who were nearly all copyholders, have had to

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pay the price of the compulsory enfranchisement of their land. I shall state my views of the gang system in the paper to be forwarded to the Commissioners.

235A. *Extracts from the return sent to the Commission by the Rev. W. H. Pinnock, LL.D.*

(1.) Women and children unable or unwilling to get regular employment are picked up by the gangers. The system is pecuniarily advantageous to the farmer; more so to the ganger when he undertakes piece work, and then very hard upon the gang.

(2.) Number of persons employed.—A ganger "farms out" 40 or 50 hands, goes out with 20 or 30 himself, and sends out the rest in companies of six or eight under the oldest as leader. The ganger gets a penny a week or more from each, and charges himself 4*d.* a day above the ordinary wages of day-labourers.

(8.) Treatment.—Variable; sometimes very harsh in piece-work.

(9.) The sexes work together, but the girls greatly preponderate.

(10.) Influence of employment on the physical condition.—It impairs growth and generates consumptive diseases.

(11.) State of education.—Bad; only three months in the winter left for education on week days.

(12.) Moral condition.—Ganging very injurious to females because of the unsettled nature of the employment and exposure to all weathers. It is only the least respectable who so work, and the immoral girls contaminate not only their fellows but others also. The system generates immorality, irreligion, and vice most fearfully.

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MARCH, pop. 5,455, acreage 19,140. 236. *Extracts from the return sent to the Commission through the Rev. Algernon Peyton, Rector of Doddington, dated the 5th day of June* 1866.

(1.) Nine gangs exist in this parish. The gangers are married men, each employing his own hands, independently of the other gangers. The gangers take the work of the farmer.

(2.) Number of persons so employed.—171 males and 217 females. These are the present numbers, and these numbers could be forthcoming at any time, but many lie still during the winter months.

(3.) Ages of persons so employed.—

	Males.	Females.
Under 7 years of age -	0	0
Between 7 and 13 -	105	78
Between 13 and 18 -	64	72
Over 18 - -	2	47 unmarried 20 married
	171	217

(4.) They are employed at the usual lighter agricultural works of weeding, hoeing, hampling, taking up roots, &c., at all periods of the year.

(5.) They go to work from a quarter of a mile to five miles distant.

(6.) Hours of work.—In summer from 7 a.m. to 6 p.m., and in winter from 8 a.m. to 4 p.m., including going and returning from work.

(7.) Time allowed for meals.—One hour at midday for dinner.

(8.) Treatment.—It is a very unusual thing to hear of any ill-treatment. In this large parish it is many years since anything occurred.

(9.) The sexes work together.

(10.) The population of the ages thus employed is particularly healthy.

(11.) State of education.—Good in this parish. All the children go to school early, and continue to go to school up to the age of 15, at intervals.

(12.) Moral condition.—It would bear comparison with any other agricultural neighbourhood.

237. *Captain J. W. Forster*, chief constable for the Isle of Ely.—The employment of gangs of women and children in field work is very general in the Isle of Ely. In my journeys about the isle I often meet gangs on the road. I have occasionally heard very bad language used by these persons, females as well as boys, on the road when returning from work. I have met gangs varying from 10 to 20, consisting of boys and girls from 10 to 17 or 18 years of age. The ganger is sometimes with them. I should be inclined to say that his presence has some restraint on their behaviour, that is, when he is himself a respectable man. The best thing to be done would be to separate the sexes. If the respectability of the ganger could be insured it would materially tend to lessen the evils of the system.

238. *John Pope, Esq.*, March.—It is the custom with all the farmers about here to employ gangs. There may be a few farmers who have children to work under one of their own men, but I don't know any. Farmers could not get a sufficient number of them in that way. There are six gangers in March. The children are generally between 7 and 13 years of age; they do not go under 7 years old. I know that the gang system leads to immorality, but I do not see how the land can be properly cultivated without them. The land about here grows much more weeds than the high country. The farmers about here did try some years to break up the common gangs; they did not succeed however. The reason was that several farmers would not agree to it. The reason why the common gang system prevails is that the work is done cheaper through the common ganger. Weeding and hoeing is put out. Hoeing is done at 1*s.* 8*d.* an acre; a man would be paid 2*s.* an acre. Of late years the harvesting has been nearly all done by our own labourers. I do not think that there is a want of cottages in the fen about here.

239. *The Rev. E. Wells*, curate of March.—I should approve of the gang system if properly regulated; at the same time there are undoubtedly great evils in it as at present carried on. Immorality is undoubtedly promoted by the mixture of boys and girls in the gangs. Their language is shocking. I continually hear the most disgusting language from the girls who are passing my house in the morning or evening on their way to or from their work. In this parish there are a very great number of women living apart from their husbands with other men. I attribute this depraved condition of a part of the population to the gang system. There are three remedies to the evils of the gang system which I would suggest:—

(1.) No children to be employed in gangs under 10 years of age.

(2.) The ganger to be registered or licensed, and no man allowed to take charge of gangs of children who is not proved to be a person of moral character.

(3.) Boys and girls to work in separate gangs.

240. *Mr. J. Lees*, superintendent of police.—I have been stationed in this town and in other parts of the Isle of Ely for about 25 years. I was at Ely for 10 years. There is more gang work carried on here than at Ely. At the present time there are nine gangsmen who employ children, besides a few men who are occasionally employed by them to take out a gang. One of these gangers keeps a beerhouse. The majority of them are men of drinking habits. We have never had any case of assault upon women by a ganger. I remember a case about six years back of an assault

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by a boy upon a girl in the gang. That is the only case of the kind I remember. Women never go out in charge of gangs here. The men generally take about 12 at a time. Sometimes a man takes as many as 30. They go to about four or five miles distance round the town. They are met by gangs from other towns. Upwell on the east is about 8 miles off; Whittlesea is 11 miles off on the west; Wisbech 9 miles off on the north; and Chatteris 8 miles off on the south. I should say that there were between 200 and 300 out now. Children of 7 or 8 years of age go out. Boys as old as 15 years of age are among them, and girls and young women. Grown-up and married women do not go much in gangs; they work by themselves. The language and behaviour of the girls in the street is very bad, particularly on Sunday evenings.

241. *Mr. William Golding.*—I have farmed about 500 acres in the fens near March, about two miles from the town. There were five cottages near me, in which my labourers lived. Besides these labourers I employed three or four men from March. The labourers living in March are employed in different farms round within a circuit of about three or four miles. Most of the farmers living within this distance employ the March gangs. I always had one. I used to agree with a ganger at the beginning of the year to hoe my crops once, and to weed them twice. About three-fourths of the land would require hoeing and weeding during the spring and summer. Some farmers hire the ganger and his gang by the day. Some farmers near the town, even small farmers, do not have the gangs, but keep a few women or girls at work throughout the season. These hands would be the wives or children of their own labourers. They must keep them regularly employed, or they would lose them. The distant farms are worked by the gangs and children. I preferred the gang because the men make the children work so much better than they do for the farmer. The ganger is able to allot the work according to the age and power of the child, and pay them accordingly. Some girls would have only three or four drills to hoe or weed, and some six or seven. Their wages were from 6*d.* to 1*s.* 2*d.* a day. Men's wages here are 12*s.* all the winter through. Horse-keepers' wages are 1*s.*, in some cases 2*s.*, higher. At Benwick and Chatteris wages are always 1*s.* lower than here. I don't know the reason for this. The children get higher wages under the ganger than they would get if employed by the farmer. They would not work so well for the farmer. They would not think that they ought to work so hard for a farmer. I don't think that the children and girls employed near the town get such high wages as those employed in the gangs. Strong girls who are always hoeing can do the work as well or even better than men who are generally at horse work, and they only cost 1*s.* 6*d.* a day instead of 2*s.* Spreading manure is done by gangs about here.

242. *Mrs. Joiner*, mistress of the girls' charity school.—The number of girls attending school in the winter is about 140. At the end of February or the beginning of March the girls begin to leave for field work. At the present time (May) we have only 45 out of the whole number. These children will probably not go out at all until harvest. They are either children who are too small to go to work, or children of a better class. Children leave this school for field work at 8 years old. There are no infants in this school; they are only admitted at 7 years of age. The children who have gone will not come back until after the potatoe picking is over; that will be about the beginning of November. Most of these children go to Sunday school, either at the church or at some chapel. When they come back I find them very rough and intractable. I very seldom hear any bad language from them while at school, but I know that their language is very bad when they are returning from their work, in the roads.

243. *Mrs. G. Best*, labourer's wife, Little London.—My husband was a labouring man, but for eight years he has been unable to earn a livelihood. Our family is nine altogether; of course we want every bit of money we can get by our children. I have one girl of 13 in service; she gets 6*d.* a week and her maintenance. She sleeps at home. I find her clothes. If she went into the fields she would earn 4*s.* a week. My chief reason for sending her into service was my objection to her being in the fields. We have considered the matter, and we do not think she would gain much by working in the fields. She would only get 8*d.* a day when she worked, and sometimes only 2*d.* for a quarter of a day when it rains; and during the winter for two or three months she would earn nothing. I have another girl of 10, and a boy between 11 and 12, both out now. The girl gets 6*d.* a day; she has been out every day this week and only earned 1*s.* 9*d.*; she has come home two or three days wet. I should like to keep my girls out of the fields altogether, but it would be much better for them to be employed by the farmers themselves, instead of the gangers. My little girl of 10 has been working four miles off this week. Last summer they went for days and days to Pear Tree Station and Friday Bride, near Wisbeach; that is six miles from March Bridge. I never heard of children being taken in a waggon. Women hoe and spread muck about here. The girls begin to learn so young they work as well as the men.

244. *Mrs. Bishop*, wife of T. Bishop, bricklayer.—I have got five children. Three are at home. My husband earns 18*s.* a week when he is at work. I object to my girls going in the fields. My two eldest girls went out for a short time when they were 9 and 10 years old. My husband is not always in work. I have had to go out myself. The gang work is very bad. The language is such as is very improper to hear. I got one of my girls out before she was 16, and the other before she was 14. One gets 2*l.* and the other 3*l.* a year. I have another little girl just 12. She gets 6*d.* a week for being with an old lady at night. There are many girls in service in March who belong to the parish. I know a lady who now wants a nurse, but will not have one out of March.

Doddington, pop. 2,290, acreage 14,679. 245. *Extracts from the return sent to the Commission through the Rev. Algernon Peyton, Rector of Doddington, dated the 5th day of June* 1866.

(1.) Seven gangs, of the usual system. The work is taken by the ganger, and he employs the hands.

(2.) Number of persons employed.—89 males; 133 females.

(3.) Ages of persons so employed.—

	Males.	Females.
Under 7 years of age -	0	0
Between 7 and 13 -	45	37
Between 13 and 18 -	44	57
Over 18 - - -	0	13 unmarried 26 married
	89	133

(5.) They work at from a quarter to three miles distant.

(8.) Treatment.—There could be no object in treating them otherwise than kindly. If a ganger were to ill-treat them they would go to another ganger.

(9.) The sexes work together.

(12.) Moral condition.—The morality of these parishes is not inferior to agricultural neighbourhoods where the gang system is not in use.

Benwick, pop. 773, acreage 3,345. 246. *Extracts from the return sent to the Commission through the Rev. Algernon Peyton, Rector of Doddington, dated the 6th day of June* 1866.

(1.) There are three gangs in this parish on the usual system. The gangers are married men.

(2.) Number of persons so employed.—65.

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(3.) Ages of persons so employed.—

	Males.	Females.
Under 7 years of age	0	0
Between 7 and 13	25	15
Between 13 and 18	15	10
Over 18	0	0
	40	25

(5.) The greatest distance they go to work is five miles.

(13.) The gang system appears to be necessary in this district, it being not overdone with an adult labouring population. The women, married and single, are usually employed in the lighter work of men, and do not go in gangs.

247. *Mr. Charles Saunders*, farmer.—I supplied the number and ages of the children employed in the running gangs in this parish. I found no children at work under 8 years of age. The children leave the field on which they are at work half an hour earlier than the regular time, when they are five miles off. They would be about two hours going the five miles. I employ the running gangs myself, and all the other farmers, except about four, who have gangs of their own. These farmers farm between 300 to 400 acres. Each of the running gangs is mixed. Neither of them is employed the whole year. We are very well off for labour. There is plenty of claying for men in the winter. Wages are 10*s.* a week. About half the hoeing is let. I think that the gangs in this parish are well conducted, but from what I know and have heard in the case of large parishes, I consider them very demoralizing. Our three gangers are respectable men. Two have been gangers from 10 to 15 years. The third has only lately commenced. The system is not on the increase. We pay the ganger 2*s.* 4*d.* for himself and from 5*d.* to 11*d.* to his children and women. Children are sometimes hired of the gangers by farmers, two or three at a time. In this case we pay the ganger for them. I do not think that they deduct anything for themselves out of the children's wages. They always are paid higher wages when they are themselves employed. I should say that 28 is the largest number a ganger would take at once. In the winter these men take claying work. Little or no gang work is done after the middle of November. They would begin again in the beginning of March at twitching and weeding. Our gangs go into March, Whittlesey, and Ramsey parishes. Farmers never send waggons for the children. I should think that half an hour is as much as is ever allowed for distance. I believe that our gangers are strict with the children. I have heard of boys and girls bathing together in other parishes, and two of our gangers, when talking about the system, told me that they believed that their children would do the same if they were not properly looked after.

Chatteris, pop. 4,731, acreage 13,394. 248. *Extracts from the return sent to the Commission through the Rev. Algernon Peyton, Rector of Doddington.*

(1.) Three parish gangs, that is, three labourers who each engage their own hands, and take the work of the farmer; also two or three private gangs, *i.e.*, large occupiers who have their own gangs constantly on their land.

(2.) Number of persons so employed.—80 males and 180 females. This number is always existing, and ready to be called out when required.

(3.) Ages of persons so employed.—

	Males.	Females.
Under 7 years of age	0	0
Between 7 and 13	60	80
Between 13 and 18	20	46
Over 18	0	28 unmarried 26 married
	80	180

(4.) Kinds of work and periods of the year at which they are employed.—Weeding, twitching, taking up roots, thrashing and dressing wheat, &c. Principally from the 1st of April to the 1st of December.

(9.) One gang of 20 is confined to females.

(10.) Moral condition.—Just as good as the class above them.

249. *Extracts from the return sent to the Commission by the Rev. M. A. Gathercole, Vicar of Chatteris.*

(1.) The "gang system" does exist in this parish. There are about three gangs, one of only about 20, the other two have I believe from 150 to 200 each in the busiest times, and for some months, perhaps about three months, there is scarcely any work at all. I cannot tell the proportion of male men and female women.

(3.) There are persons in the gangs from under 7 years old to 40 or 50 years of age. Many girls remain in the gangs till they are married, and then afterwards to the age of 40 or 50. Some have families of children and are prevented from going out. But boys leave the gangs at the ages of 15, 16, &c., and go to work individually as it were. Some become grooms to farmers, &c., and some go to work on fen farms, three and four miles from the town, going on the Sunday night or Monday morning, and not returning to town till Saturday night or Sunday morning, living and sleeping in the small farm house, occupied by the foreman, the farmer himself living in the town.

(4.) They are employed in different kinds of agricultural work, such as picking couch grass, commonly called "twitch," and in planting potatoes, and afterwards weeding and cleaning the crops till they become too high, and haymaking, (the larger of them), and then the gang work nearly ceases till harvest, and then the girls and the women go a gleaning, and some of them reap with their husbands, and with their own children who are strong enough; and all become busy in one way and another. And after harvest is all over, then comes on digging up and picking up potatoes, and carrots, and mangold wurzels, and cutting off the tops and tails or roots of the carrots and mangolds, and separating the small ones from the large, for London markets, or for putting down in pies or pits, covering them with straw, and then earth to preserve them through the winter or for a shorter time. The potatoe and other land is then cleaned by picking out the "twitch," &c., to prepare it for wheat, and after that the gangs lie still till about the end of February, or the beginning of March, as the weather may happen to be suitable or not.

(5.) They go to the extremity of the parish, and sometimes beyond it, according to the occupations of the farmers, and some parts of the parish are nearly if not quite four miles from the town.

(6.) They leave the town for work with an abundance of noise, bawling, and roughness at 7 in the morning, and are expected to arrive home by 6 or a little after, in the evening, no matter what distance their work lies off.

(7.) One hour for dinner or luncheon, which consists of bread and salt pork, or cheese, or butter, or apple, or other fruit cakes or rolls. Their chief meal being what is called the supper, but is a dinner at the fashionable hour of 6½ or 7, when they have hot puddings, hot meat and potatoes, or other vegetables, &c., when the whole family sit down together, the mother who generally gets her tea at 4½ or 5 chiefly waiting upon the family.

(8.) I think the workers are generally treated by the gangers as well as they very well can be, but some of the farmers go with the gangs, and are cruel slave drivers, till the poor children have cried when they knew that they were to go for such a man, but these cases I believe are becoming more rare, for I now seldom hear of much of that kind of treatment.

(9.) The sexes work sometimes together and sometimes apart, according to the wishes of the farmer, and the supply or convenience of the ganger, who frequently and indeed generally has to divide his gang

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into smaller gangs, and then if necessary he sends with each a women to look after them. The ganger charges the employer a halfpenny per head for the number he sends to the employer. The halfpenny is no injury that I know of to the children, but the farmer find it convenient to go to a ganger saying, that he wants 2, 4, 7, 10, 20, or 40 hands the next morning, and the ganger supplies him with all or a part of them, as he may be able, considering his supply of children and his engagements with his other employers.

(10.) The employment being in the open air is, I think quite healthy, and not injurious, except to weak and more delicate constitutions; for, of course, they often get thoroughly wet, and draggled, and have to walk to sometimes one, two, three, or nearly four miles as the case may be.

(11.) The state of education is necessarily as low as it can well be. During the depth of winter there are bigger boys and girls in the schools, but as the working time comes on they all leave one after another, until, during the greater part of the year, scarcely a child of the labouring poor is to be found in the schools above 7 years of age or thereabouts. And when as is frequently the case for a day or two or three days together the weather is too bad for them to go to work, the bigger boys and girls will not as they might go to school. Finding that parents did not like to pay a penny each for two or three children who might not go to school more than half a day or a day or two, I threw my own schools open without any payment at all to take away the objection, but it has had but little effect. Some few years ago I and some others started a night school for young men and boys, at a penny a week to cover the expenses of lights and pens and ink, slates, &c., and for the first fortnight or so we had nearly 100 promising pupils, many of whom hoped to pass the time in sprees or mischief of some sort, but finding themselves quietly foiled they left one after another and re-betook themselves to smoking and rowing about the streets. About three years ago we tried the experiment again, but to no purpose. And now with 21 years of experience in a parish like this, and with my knowledge of years previously, and till now of the subject generally, I am confident that no efforts will avail to ensure requisite education for the children of the labouring class, and those immediately above them but *a law compelling* a certain fixed amount of education—say reading, writing, and the first four rules (simple and compound) of arithmetic. Let every child be compelled to go so much to school every week until he can pass an examination so far, and then at whatever age give him a ticket to say that he has passed, and his parents and himself are no longer subject to any penalties. Let the parents choose the school, either church or dissent with liberty to change from one school to any other. Nothing else will secure education to the classes I have alluded to, and in all parishes where like this there are church schools and dissenting schools, the compulsory plan might at once, and I believe, *easily* be carried out.

(12.) The "moral condition" of the children and parents is as low and wretched and miserable as it can well be. Boys and girls assembling together in numbers (whether the sexes be separate or not) and of course under scarcely any restriction as to talk, are sure to corrupt one another, and become bold and impudent, self-willed, and audacious. Such is certainly the result of their training in the gangs, and this more especially the case with the girls, who are indeed far more immodest and impudent and worse than the boys. Their language is low, debasing and disgusting, and respectable people, especially ladies, are often insulted by their general and personal remarks; and to speak to them would only be to ensure an increase of their abuse. After they have had their suppers at about 7 o'clock, the boys are playing, and some of them smoking about the streets, and the girls flauntily dress themselves out and prance about the streets. Fornication and bastardy are so common that I seriously question whether any girls or boys are pure or chaste in mind or body beyond the age of 17 or 18 years; I mean of course the boys and girls of the ganging and labouring classes. I seldom marry any of them without being obliged to see the bride to be of larger dimensions than she ought to be. The parents have little or no control over their children, for many of themselves after having left ganging in the fields, going after they are married in other houses with children in their arms or standing at the corners of the streets and passages. Having been in the gangs all their lives they know next to nothing of domestic work and management. They can neither make nor mend their husband's shirts or stockings or their own clothes and their children's. Their houses are dirty and their husbands finding discomfort at home are too often driven to the public houses, and those public nuisances the beer shops, of which places there are I believe more in this parish for under 5,000 inhabitants than for 17,000 in a low district in St. Georges-in-the-East, London. The girls will not go out to service because they can *gang* in the streets after they leave the fields; and especially on Sundays. And as the girls are kept at home till they are married the cottages of the poor are most indecently and disgustingly crowded, so that grown up boys and girls sleep in the same rooms and sometimes even in the same bed-rooms with their parents. Parents do not care to have their children leaving them because they frequently assist much in maintaining them, and so they cannot and dare not restrain them. Sometimes while the children are at work the father is doing nothing, and cares not to work at all very much. As domestic servants are much wanted everywhere, it would be well to prohibit any girls from working in the fields between the ages of 14 and 20 or 21. Much evil might be remedied by having intelligent, sound principled, good religious men and women for gangers; but I see no means of securing this unless the incumbent and church-wardens were to have the licensing of such persons. By religious, I do not mean affected, canting, hypocritical people, they would only disgust the children.

M. A. GATHERCOLE,
Vicar of Chatteris.

250. *Mr. Robert Newton*, Park street, merchant and farmer.—I have been acquainted with this town for the last 30 years. For part of this time I have farmed in the parish. I am well acquainted with the gang system, which has prevailed here for the last 40 years. The commons were enclosed and cultivated in 1809, and ever since gangs have been used. The mixed gang system has been felt and known to be an evil in this town. I am not aware of any attempts having been made to put it down. The farms in this parish are of all sizes, from 100 to 600 acres. The large farmers generally have a gang of their own, which would suffice for all their requirements except in a wet and fast growing season, when some of them would have one of the common gangs in addition. There are about four or five gangers in this town who gain their livelihoods entirely by taking children out to work. The system is this:—Children are sent by their parents to one or other of the gangers to get employment. The ganger will have orders from farmers to send them a certain number, as required. Every morning in the summer time about 100 to 130 children and women will be at the ganger's house about 6½. They will then divide their children into lots or sections, and marshal them off to different farms under different superintendents, generally some elderly girl or woman of about 20 to 25 years of age. These women get 10*d.* a day, and work with the children. They are not a respectable class. They are generally running about the streets at night. I should say that at this time (May) there are between 300 and 400 children and women out weeding in different gangs. The gangers have all the children attached to them, so that a farmer cannot get even a boy when he wants him without going to the ganger for him. The reason for this is, that the gangers ensure constant and per-

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manent employment for the children, while the farmers would only employ them for a short time, unless they were the children of their own labourers. Moreover, the parents prefer sending their children because they can make the gangers take their little children as well as the bigger ones, while the little children would be useless to the farmer. They would not be employed except in a gang; the ganger, however, would get as much by the little ones as by the big ones. He would charge his halfpenny for the little ones as for the big ones. When he goes himself he gets 2*s.* 6*d.* a day. I cannot get a boy, except from the ganger. I had a boy from a ganger the other day, and I asked him to stay and work for me, and he would not stop. The reason why the farmers like the system is, that they would have so much trouble in getting the children without the gangers. I don't think that the farmer gets so much work done. We have to go to the ganger for all extra hands for haymaking, potato setting and gathering, for threshing and dressing corn, &c. The gangers are themselves respectable men, but they employ all that come to them. Farmers sometimes object to the employment of particular women in a gang. In such a case the ganger will send her to another farmer, and put some one else in her place.

251. *Mr. Robert Mitchell,* inspector of police.—I have been here for 18 years. The gang system has prevailed to much the same extent during the whole time. It is slightly on the increase, if anything, so far as my observation enables me to form an opinion. I should say that the gang system has a very injurious effect on the character of the young persons employed in the fields. The behaviour of the boys and girls when going and returning from work is very bad. Their actions and their language are bad. I am speaking of persons of all ages, between 8 and 25. There is no control kept over them. One of the gang-mistresses here is a common prostitute. Almost all the elder girls who go with them are always tramping the streets and attending all the dances.

252. *Mr. William Skeels,* farmer.—I farm about 500 acres. I am entirely opposed to the gang system. I have about six light hands more or less regularly employed. In ordinary years I should have employment for about 10 light hands during the summer, and should not want a common gang at all. At the present time I am employing a gang of 37, weeding wheat. I want these extra hands for weeding, because this field has lately fallen into my hands and has not been properly cleaned before. I have this large number in order to get the work done in three days. A smaller number would do it as well, but it would require my keeping a man from other work while he was looking after them. I send one of my own men with the gang. Perhaps the work would be better done by a smaller number. My reason for objecting to the gang system is, that it produces such ill manners and bad conduct in the children. It is a fact, to my own knowledge, that the parents of large families will remain at home idle as soon as they get their children into work. The large families are the best off in this place. If the gang system was abolished I should have about 8 or 10 boys, whom I should keep permanently, or girls if I could not get boys. No farmers of less than 500 acres could not keep a gang of their own through the whole year. My farm is about three or three and a half miles from the town. I have three cottages on the farm. I have a few labourers from Chatteris. They are allowed two hours a day for going and returning from work. Wages are 1*s.* 10*d.* a day. I do as much piecework as possible. I have all my hoeing, ditching, muck filling and spreading done by piece. All farm work but the horse work can be done by the piece, that is never put out. At a fair calculation a man does half as much work again on the piecework system to what he does on a day wage. He does more than that I think. It requires a thorough knowledge of the work for the farmer and labourer to agree as to the price of different work. When land, even fen land, is weeded regularly every year there is no necessity for any great number of hands. The gangs in Chatteris work within a circuit of about four miles. I should like to see the gang system done away with. The boys are spoilt by it, as well as the girls. The girls are all depraved by it. The sexes ought not to be allowed to work together. The ganger ought to be done away with altogether. We have an abundance of labour here. I have extra hands at harvest. We generally calculate that there ought to be three men to every 100 acres in the fen.

253. *Mr. William Clarke,* draper, &c.—I have resided for 30 years in this town. The gang system is a great evil here. It puts a stop to education and demoralizes the minds of the young, and unfits females for being good house servants. Girls earn their 6*d.* or 8*d.* a day by working from 7 in the morning to 6 at night, and then they have their earnings to themselves. They like this better than service. I am well acquainted with the character of the young people in this place from being connected with two schools and taking an interest in their welfare. I have often observed girls well inclined become spoilt by the gang system. The houses of the poor are in many cases far too small; the sexes are mixed in the bedrooms. When I speak of the gang system, I mean the employment of children under the common gangmasters. As a rule, these men are hardly a steady class. The business is sometimes taken up by men of idle habits. I have spoken to farmers on the subject, but do not remember any particular conversations. The wages of the men here now are 11*s.* a week. I think that there is more care taken by the gangers now to keep the boys and girls separate. The language and conduct of the children is very bad in the streets, on Sunday evenings, perhaps, more than on other days. The mortality of infants and children under 2 years old in this parish is very great; I attribute this to the employment of the mothers in the fields, both before and after their confinement. The practice of drugging the infants with opium and leaving them when they go out to work prevails to a great extent. Out of 72 burials in our cemetery during the last year, 30 were the burials of infants of 1 year old and under.

254. *Mr. John Fryer,* farmer.—I farm about 1,000 acres in this parish. Up to the last six or seven years I had gangs of my own. I had two gangs of about 30 each. I kept them at work nearly the whole year. I had no children under 10 years of age. They were managed by two of my own labourers. Lately, however, I have found it impossible to keep private gangs, owing to the increased demand for the labour of children. This increased employment of children has been caused by an increase in the quantity of roots grown in this parish, such as potatoes, carrots, mangolds. It is frequently the case now that able-bodied labourers are remaining idle when their wives and children are employed. This is particularly the case in the winter time, when the children and women are sorting potatoes. Girls are also employed at hoeing in place of men, they being cheaper on this soil. Although I have gangs from the gangers now, I still forbid children under 10 to be employed on my land. There is a great demand for children here, but the children under 10 years of age could be spared; up to that age they ought all to be at school. The great evil of the gang system is, that the employer has no authority whatever over the conduct of the children when working on his land. Even his presence does not affect the behaviour of the children. I will give you an instance. A short time since I sent to a ganger for 10 hands to fork up twitch. When I arrived at the field I found that it would be best to hand-pick it, so as to complete the job at once. I told my foreman to have it done in this way, and then left the field. My foreman then told the children to hand-pick the twitch. They said that they had been sent by their ganger to fork it, and should not do it in any other way. My foreman was obliged to send them home. They were girls of 15 and 16 years of age. There is a way of getting rid of twitch now without employing gangs; it is buried by being ploughed in by deep ploughing, instead of being brought on to the surface. Horse hoeing if more

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practised would save a great deal of hand hoeing and weeding. Hoeing and weeding may be substituted for each other so far as regards the intervals between the drills. I believe that five miles is the furthest distance to which the gangs go from this town. That is a very long way for children of 10 years old. They would have to walk 10 miles a day besides the walking about the land. They sometimes go this distance for a week together. There are only a few places to which they go beyond a circuit of four miles. Within that circuit there are very few batches of labourers' cottages, but plenty of farm houses. Nearly all the children working in the gangs within this circuit are drawn from the town. Gangs from Ramsey and from Warboys meet our gangs in that direction. I myself proposed to the other farmers about here to make an attempt to stop the common gang system by agreeing not to employ the gangers. I could not get their cooperation. The small farmers like the gang system best. Even in the fens, a good farmer is supposed to have no twitch. Men are sometimes put to weeding even about here for want of a gang. They would be paid their full wages, but they dislike the work, and do not do so much work for their money as the children.

255. *Mrs. Welfare*, wife of J. Welfare, gangmaster.—If you stop the children going to work I don't know how poor people are to live. I have one daughter living at Somersham. She went out to service at 14 years of age. She was at a farm house in the neighbourhood at first. She was nine years in service. She first got 3*l.* a year. Her highest wages were 8*l.* a year. She then married. She has been married 12 years and has seven children. The eldest child is a girl, 11 years old. Her husband is a man in regular work. He only was earning 9*s.* last winter. He is getting 10*s.* a week now. My daughter told me how pleased she was to get the money her children earned for her. The three eldest got her 8*s.* 6*d.* one week. She does not like them working in the fields. She will send them to service as soon as they are big enough. The women here have 11*d.* a day now, because the men's wages have been raised to 11*s.* a week. There is more hoeing done by women now than there was when I was young.

MANEA, pop. 1,206. 256. *Mr. Robert Hiam.*—There are one or two common gangs in this parish. They are employed in different farms in the neighbourhood of the village. The farmer employs the man to bring the children and superintend them, and pays him about 2*s.* a day for his own wages; the farmer can pay the children himself if he likes. There are very few farms about here above 300 acres. Some of the farmers have private gangs, managed by their own men; they keep them all through the summer. No gangs come here from any other parish. There is no village nearer than March and Chatteris; they are both eight or nine miles off. The farms do not lie together. The land in one occupation is often scattered about. There are cottages about the fen.

257. *Mr. G. Elliot*, master of the National school.—I have been master of this school for 12 months. During last winter the attendance was 125 on the average. About Easter time they began to fall off, and now we have an average of 60 only, boys and girls. All these children are under 10. We have no boys over 9 years old in school who are the children of labourers. Girls go to work as early as the boys. All the children absent from school are in the fields. They are working in the gangs. I think about a dozen go in a gang here.

258. *Edward Cox*, labourer.—I have nine children at home; the eldest is 12. I have three children out working and six little ones too small to work. The eldest of them is a girl of 8 years old. The three out are boys. I have no work now. I generally get piecework. I can make 2*s.* 3*d.* to 2*s.* 6*d.* a day at piecework. If I worked for day wages I should only have 1*s.* 8*d.* The youngest boy gets 6*d.* a day and the other two get 9*d.* They are in a gang. They go about two to three miles round. I never heard of farmers sending for children. I pay 1*s.* 2*d.* a week rent for my house. I have only two rooms. The good cottages in Manea are 5*l.* a year, with a bit of a garden. Hoeing is let out at 1*s.* 8*d.* per acre to men. A man would do rather more than an acre a day. It ought to be 2*s.* a day. Only one farmer about here has a gang of his own. Men are generally employed in the winter at claying and dikeing. A man can earn 2*s.* 6*d.* a day now. Wages are not so good as they were. Farmers will not let you earn 3*s.* They put the work out lower than they did.

259. *Mr. J. Griffin*, innkeeper.—There is no difficulty in getting servants here. Service pays the girls better than field work. A good servant of 20 years old or more gets 10*l.* in a farm house. Some large farmers have three servants. They would pay them 7*l.*, 9*l.*, and 11*l.* a year. A girl of 14 or 15 would get 7*l.* a year.

260. *Mr. J. Plowright.*—I never employ a common gang. I have about 25 to 30 children on my farm now from 10 to about 14 or 15 years of age. I employ them from the middle of April to the middle of June. I farm about 600 acres. I think that there are other farmers besides myself who don't have common gangs. I don't think that the common gangs are necessary. I prefer having the children in my own employ, under my own men. I should keep some of the boys through the winter to dig twitch, clean mangolds, &c. A farmer must keep his children in regular employ or he would lose them. It is a rule with me to divide the sexes. I used to farm in Deeping fen near the toll gate. I had a few cottages near my land. Many of the labourers, however, who worked about my farm came from Spalding, four miles off. The land in Deeping fen is better than the land here. The rent there was 35*s.* an acre. I used to have gangs from Spalding. I think there was as much labour employed in the winter there as here. The gang system was more prevalent there than in this parish. If farmers permanently employed two or three women they would not want a gang, but children must be put under a ganger, however small a number is employed.

LITTLEPORT, pop. 3,728. 261. *Mr. Henry Luddington.*—I farm about 1,100 acres in one occupation. I do not employ any common gang. I have at the present time about 40 women and children engaged hoeing, weeding, and twitching. They are divided into four parties; each party is under one of my men. The women are by themselves; the girls and boys are separated. It is a rule with me to separate them as much as possible. There are about 16 women, *i.e.*, girls from 16 years of age and upwards. I keep these hands nearly the whole year round. All the land on which they work is fen land. The younger ones are principally employed in the spring; the elder girls assist in the winter time at threshing, dressing corn, and knocking manure. I do not think that I should want the same number of children on a high land farm, but I should have the same work for the women. There is a good supply of labourers about us now. The smaller farmers use the common gangs now because they do not keep their hands so regularly.

262. *Mr. William Luddington.*—I farm about 800 acres, principally fen land. I have two gangs during the summer; one gang consists of boys of 9 to 13 years of age, the other of girls from 9 to upwards of 20 years of age. I have no married women now; married women would work separately. It is a rule with us not to mix the sexes. A few little boys may be with the girls. This rule is carried out by all the large farmers in this parish with more or less strictness. I consider that it is very wrong for the sexes to be mixed. I believe that there are no common gangers in this parish now, nor have been for the last three or four years; there used to be one or two. The gangs were employed by the farmers occupying 200 and 300 acres. There are several farms of that size in the parish, and almost entirely in the fen. These farmers

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now have their weeding done by the wives and families of their own labourers. Sometimes, but not generally, they would be put in gangs. Labourers' cottages are distributed about the fens. During the last three or four years the number of labourers' cottages has much increased. In a farm in the fens I should say that there ought to be six cottages for 300 acres. I know the common gang system. I believe that system is much more demoralizing than the mode in which children and women are employed here. My gang consists of about 12 or 20 girls; they are employed at hoeing occasionally, chiefly at twitching and weeding; after harvest they will knock manure, pick twitch, take up mangolds and carrots. Children do not do this; it is let out generally. The rule is for the girls to work to 6 unless they have a long way to go home, and then they are allowed half an hour or three-quarters of an hour. The wages of girls are 6*d.* to 10*d.*; boys get a little more. Men's regular wages are 10*s.* a week; but much work is done by the piece, and there are few men who do not get more than 10*s.* About eight or nine of my cottages are rent free; the rent of the rest is from 2*l.* 10*s.* to 4*l.*

263. *Mr. Robert Leech*, master of the National boys' school.—From December to March our average attendance was 130. At the present time (May 7) we have 101 in attendance. The average age of my first class is 11 years; only six out of 28 have left for field work in this class. The average age of my second class is 10 years; out of this I have lost 11. The whole number is 30. The average age of my third class is 9 years; out of 41 I have lost 20 in this class.

264. *Mrs. Wise*, mistress of the girls' National school.—Our average attendance during the winter was 147. During the summer last year it was 101; the attendance at present (May 7) is 108. I attribute this difference to the field work. The girls who have left for work are from 8 to 12 years of age.

DOWNHAM, pop. 2,158. 265. *Mr. William Martin*, farmer, Downham.—I employ a gang under a man exclusively in my own employ. This is the practice with the other large farmers in this neighbourhood. I used to farm near Downham Market. There was a large common gang there. I would never have them. I did not like them. I used to get the hands I wanted without sending to the ganger, and employed them under one of my own men. As far as my experience goes the common gang system is quite unnecessary.

266. *John Salhouse*, foreman to Mr. Martin.—From spring to harvest we have a gang of about 14 boys and girls between 8 and 15 years of age. They work under a ganger. He only works on our land. There is no travelling gang in Downham. The evil of the travelling gangs is that all sorts of persons are mixed up in them without any regard to their characters. We have no girls under 10 years of age now, but I know that they are sometimes employed under that age. The ganger has no control over the children on their way home. They begin at 7 in the morning and give over at 6. They have half an hour for breakfast.

267. *Mr. Thomas Gilbert*, farmer.—I farm only a few acres, and never require a gang. I never employ a ganger. There are a great many small farmers about the fen, holding from 15 to 100 acres. They would never employ a common ganger. They would get a few children as they wanted them, and go with them themselves. Hancock and his gang are employed by Mr. Martin all the year round. He would have about a dozen in the weeding season. The children go out very young now (April). A little girl about 8 years old went past here this morning. Hancock separates the girls from the boys when they are working, and does not allow any idling or talking when at work. Men's wages are 10*s.* a week; women get 10*d.* a day. The youngest children get 2*s.* 6*d.* a week.

268. *Mr. H. Muriel*, farmer.—I am not in the habit of employing a common gang. The work I require to be done I get done by a few women. They do not require a man to look over them. The larger farmers about here have gangs of their own whom they employ nearly the whole year. The work done by gangs here is twitching, hoeing, weeding, &c.

269. *Mr. Philip Hopkins.*—I farm 300 acres. I get all my light work done by women who work by themselves without a ganger. I go myself and look at them now and then. The women are generally labourers' wives. There are plenty of labourers about here. It is nearly all arable land. The rent would average 35*s.* an acre. The roads about here are the worst in the kingdom. The labourers' cottages are generally their own. The wages of men are 10*s.* a week; they are generally paid for wet days as well as when they work. I employ the same number of men throughout the year. I have about six or seven women and about nine men. I never employ them on the piecework system except at harvest. If I did I should not want so many labourers. They would do piecework and get piece wages. Men could never do weeding so cheaply as women. A boy of 10 years old can do as much as a man. Only large farmers employ gangs. I would never have anything to do with the common gang system; they don't do their work properly.

HADDENHAM, pop. 1,976. 270. *Mr. Robert Pate*, farmer.—There is no common gang employed in this parish. We employ women and children for weeding, twitching, and hoeing. We pay and hire the children ourselves, and put them under the management of one of our own labourers. I never heard of a common ganger in this parish. We find no difficulty in getting all the light hands we want, nor any difficulty in getting them to work under our own men. If they don't work we discharge them and get another. I am sure the common-gang system is not necessary. I believe there is one at Sutton. We have fen land in this parish.

270A. *Mrs. Parr*, labourer's wife.—Children are very generally employed by the farmers here at twitching and weeding. The big ones hoe, knock muck, set and gather potatoes. There are no regular gangers. The farmers employ their own men to look after them, and pay the children. I have three daughters out at work, one of 20, one of 15, and one of 13 years of age. The little one gets 7*d.*, the next gets 8*d.*, and the eldest gets 9*d.* a day. They go to work at 7, and come home at 6 in the evening. They have about half an hour at 10 for what they call their "docking," and an hour at 1 for dinner. I never heard of any child being ill used. The children want a little correction sometimes. As many as 20 work together sometimes. I think that it is much better for the girls to go out to service than to work. It is more difficult to get them out here than at a market town. Unless girls are brought up to it, they do not like field work so much as service. Men have 10*s.* a week wages. That has been the wage for the last three years or so. There were a good many men out of work here in the winter time. I never heard of men complaining that women and children interfered with them. Girls go out to work at 8 or 9 years old. There are plenty of that age out now. Some of the bigger ones go out all the winter. A girl of 13 or 14 could get 30*s.* for her first year with a farmer.

WILBURTON, pop. 560. 271. *Mr. J. Latter*, schoolmaster.—Children are employed in the fields here, but not in gangs. Out of 70 children attending this school we have lost about 25 during the last two months (March and April). When they are employed at twitching they are put under the management of an old man. In other work they are not put under any one. There are no common gangers at all in this parish.

272. *Mr. W. N. Sabbaton*, farmer.—We do not employ any common gangs in this parish. We employ children ourselves to do the weeding and other such work. I always put a man with them when there are 14 or 15 together. In small farms there would be too few at work to render it worth while to put a man

with them. The common gang is cheaper to the farmer, because the children do more work, and small farmers could get the children when they wanted them. In the fen there is more twitch pulling in the spring than in the high land, because the course of farming is different.

SUTTON, pop. 1,731. 273. *Mr. John Vipan.*—I have about 400 acres in my own occupation in this parish. Of the last few years I have employed a gang of boys only. My neighbour, a large farmer, has a gang of females only for weeding, &c. I never heard of any evil in Sutton arising from the employment of gangs of this kind. I have heard of improper conduct taking place in the fields in the neighbourhood when the common gangs are used. There is one ganger in this parish who has a lot of boys and girls. Farmers send to him for half a dozen or so as they want them. I keep mine on the whole summer, and have nothing to do with the ganger.

274. *Mr. Edward Calthorpe.*—I farm about 600 acres. I have about 20 men and boys in my regular employment.

Foreman	1
Shepherd	1
Horsemen	8
Day labourers, groom, &c.	6
Boys between 12 and 16 years of age	4

Besides these workmen I always have about three women. I have a gang at work now of about 27 women and girls, and three little boys. I believe the system of putting this class of hands to work together under an overlooker is practically necessary. Women and girls could not work so well separately. The evil of the gang system is the mixing the sexes. I employ a gang to get up mangolds in the autumn.

275. *Mr. John Randall*, assistant overseer.—There are two common gangers in this town; they are father and son; the man is about 60 and the son about 30. I have had the father on my farm. He has brought sometimes 14 and sometimes 20 with him. I should say that he never has more than 30 with him. He may have 60 in his employ now. He would send out parties of 6 or 12 to different farmers. There are three or four farmers who never employ him, but who have their children from him. He charges the farmer the children's wages and ½*d.* per head for himself. When he goes he has 1*s.* 10*d.* in addition for his own wages. It is not recognized as right for the gangers to deduct anything from the children's wages. I think the gang work is very bad. There was a case here a few years back of a girl being killed while at work. She was injured by other girls setting upon her. I don't know much about it. It was a private gang. The ganger was not looking properly after the children. I have heard their language, which is very bad, when at work. The ganger takes no notice of their moral behaviour. The system ought to be properly regulated.

MEPAL, pop. 530, acreage 1,500. 276. *Extracts from the return sent to the Commission by the Rev. F. Daubeny, Vicar of Mepal, dated the* 17*th of May* 1866.

(1.) Women and girls and boys are employed by the farmers in small numbers. A man overlooks the girls and boys. The number varies; in spring six or seven.

(2.) Number of persons so employed.—In the spring there are 60 or 70, when weeding is most needed.

(9.) They work sometimes together, sometimes apart.

(11.) Education is neglected for the sake of work.

(12.) Moral condition.—Not good.

(13.) It has a demoralizing tendency, encouraging careless and loose habits. Some young women prefer it to service on account of the independence they feel.

STRETHAM, pop. 1,156, acreage 3,809. 277. *Extracts from the return sent to the Commission by the Rev. W. H. Baber, Rector of Stretham, dated the 8th of June* 1866.

(1.) Four gangs exist in this parish.

(2.) (3.) Number and ages of workers.—30 males and 20 females between 7 and 15 years of age.

(4.) They are employed at hoeing, weeding, and picking "squitch" in April, May, June, July, October, and November.

(8.) Treatment.—Satisfactory to themselves.

(9.) The sexes work together.

(10.) Influence of employment on the physical condition.—Healthy.

(11.) State of education.—Below that of children not working in gangs.

(12.) Moral condition.—Ditto.

(13.) The gang system is extensively demoralizing.

ELY, pop. 7,883. 278. *John Evans*, labourer and gangmaster.—I have been in the habit of taking children out to work for 30 or 40 years. There is only one other man who takes out a gang now. When I was a boy there was an old lady who went out. Many more children went out then than now. I think that children go to school more now than they did. I find it difficult to get children now. I should like to have 15, but I can't get more than from 8 to 12. The men's wages have been only 10*s.* lately. Women get 8*d.* and 9*d.* a day; children get from 6*d.* to 8*d.* I don't have any children under 12. I get twitching and weeding to do now. I begin about April and work up to June. We have a tea party about the 12th of June, that is the finish up of my season. After harvest we get a little work mangold pulling. I never go further off than two miles from Ely. There are fens within a mile of Ely, but I get most of my work on the high land. Many farmers about here have gangs of their own. They do this now more than they used to do. That is one of the reasons why I can't get children now. There are children about whom I could have, but they have no shoes. Wages here used to be 2*s.* some years back. Harvest wages are 18*s.* a week for one month. My present gang consists of girls and boys; the boys are about 12 or 13, and the eldest girl is 16.

279. *Mr. G. H. Garratt*, master of the boys' National school.—The number of boys on our books is 220. Our average attendance throughout last year, *i.e.*, from May to May, has been 190. At the present time (May) 4th I have about 202 in attendance. Our school is very little interfered with by field work. Most of the boys are children of agricultural labourers. There is an inducement to keep boys in regular attendance in this school. Suits of clothes are given to 65 boys. These presents are given according to the good conduct, proficiency, and attendance of the boys. That is the only advantage boys get by regularity. Any boy who has been absent for six weeks in the year, except for illness, loses his clothes.

[N.B.—I questioned the children in both the boys' and girls' school, and it appeared that the only children present who had ever gone out to work in the fields were the four following boys.]

280. *Gotobed Pawley*, boy in the National school. —I was 12 years old last harvest. I have been out to work with Mr. Evans; I went "queeching" about a mile off. There were 11 others with me; there were three girls; they were the same age as I was. I only worked one week with him; it was a in holiday week; I got 6*d.* a day. Father is a labourer; he is lame, and can't work.

281. *John Hankin.*—I was 12 last May. I worked this year with Mr. Sindell, a farmer; I twitched. There were eight others with me, boys and girls. Mr. Black, one of Mr. Sindell's men, looked after us; I got 8*d.* a day. I worked for a fortnight. Father is gardener. I have three brothers and sisters.

282. *Thomas Haylock.*—I am 10; I worked once at Mr. Dencher's. There were six of us altogether. Mr. Jugg looked over us. There were only boys. I only worked a quarter of a day; I got 2*d.* That is all the work I ever did.

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283. *George Haylock.*—I am going 12. I went "queeching" for half a day this year. That is all the work I have done.

[The next five witnesses were girls, who with five others of about the same age composed one of the Ely gangs.]

284. *Matilda Fenn.*—I am 13. I have worked three years. I get 7*d.* a day. I began to work about two months back, in March; I "queeched"; I am "queeching" now. I hoe sometimes; I have a hoe of my own. I start at 7; we get to work at 8; we work till 12. We have an hour for dinner. We play about then. We break off at 6; we get home as soon as we can. Father is a gaulter; he works in the pits. There are 10 of us at home; only one is younger than me. One brother and one sister are with me. I go to school on Sunday. I was one year at the National school; I can't read much; I can sew. (Spells "sew" correctly.) Last year I worked up to June. I did nothing all the autumn and winter. I could not go to school; they won't take us unless we go regular.

285. *Mary Ann Redding.*—I shall be 16 next birthday. I was at the National school seven years. I have only been out of school two years. I have no brothers and sisters at home. Father is not in regular work. I had a place offered me, but I had no clothes. I get 7*d.* a day. I can read, write, and sew. I don't work at all after harvest.

286. *Ellen Finch.*—I was 11 last March. I was two years at the National school. I have only worked this year. I get 6*d.* a day. I can read a chapter in the Bible. I have read little books; I don't remember the names of them.

287. *Sarah Okey.*—I am 13. My birthday is in January. I have worked two years. I got 6*d.*; I get 7*d.* now. There are three brothers and sisters at home. I can read. I was three years at the National school. (Spells school and other words correctly.)

288. *Alice Murray.*—I am 14. I was five years at school; I can read and write. I have been four years at work; I get 8*d.* a day. I have four brothers; there are two at home. Mother is a widow; she goes out washing. I have tried to get into service. Mother wishes me to go out.

289. *George Vale,* labourer.—It is now six years since I went out with children. I was in the habit of going out as ganger for about ten years. I worked the whole time for one farmer, but on different farms. I used to have about nine or ten children and young women with me. I only get work for my gang in the spring and summer, up to harvest. I had 2*s.* a day for overlooking. The regular wages were 10*s.* a week. They began at 7 in the morning, and worked to 6 o'clock. The men always begin at 6 o'clock. We stopped at 11 for about a quarter of an hour, and then at 1 o'clock for dinner, for an hour. The elder girls were generally very rough. The boys were nearly all between 9 and 12 years of age. I have had both girls and boys for three or four years running. I would never send my girls into the field, certainly not in a gangs; they learn so much wickedness. Some girls are kept at work in the yards cleaning mangolds for the beasts in the winter season. The ganger must be very strict with the children if he wishes to keep them quiet. There are not so many now who go out as there used to be. There is not so much work taken by the gangers now. There used to be an old lady here who went out regularly with 20 or 30 children. She used to take weeding and twitching at so much an acre. Harvest wages about here are 3*s.* a day for a month, and three pints of beer, or 4*d.* a day extra.

PRICKWILLOW. 290. *Mr. Hanslip Long,* Sheppey Hill Farm.—I have occupied this farm three years. I believe that there is no common ganger ever employed in Prickwillow. It is entirely fen land. I occupy 850 acres. I have about four or five women at work during the chief part of the year. They are the wives or daughters of my own labourers, living on my farm. I have only one boy under 16 years of age. I never have a gang at all. I might find use for one, but I have never felt the want of it. I have about 25 men and six boys between 16 and 18. I employ nearly all these hands the year round. I get all my weeding done by the men and the boys. I pay 2*s.* an acre for hoeing, and 1*s.* an acre for weeding. The regular day wages are 10*s.* a week; but the men very seldom get only this. Nearly all my work I get done by piecework. The men get from 13*s.* to 15*s.* a week by working by the piece. The horsemen get 11*s.* and 12*s.* I put out hoeing, weeding, manure filling and spreading; of course dykeing and claying is done by the piece. I let all the work except the horse work. I consider that the same number of men do twice the work when employed on the piecework system to what they do when working for day wages. I don't like employing women. I don't think it is a good thing for women and girls, and I don't think that the farmer gains by it. There is an abundance of labour about here. There are plenty of cottages scattered about.

291. *Mrs. Lee,* labourer's wife.—The girls here mostly go to "broad work." Only a few can get places; and girls like broad work the best. There is one ganger, Mr. Leggett. He takes children about to different farms. I don't know any large farmer about here except Mr. Long, who does not like to have women and children to work. Mr. Leggett's gang is a mixed gang.

292. *Mr. Robert Palmer,* farmer.—I very seldom employ any women and children. I farm 300 acres. I have nine men. I let my hoeing. I don't let the weeding. When the men have nothing else to do they take to weeding. I weed once or twice, as the land wants it. I don't think we get the weeding done so cheap by men. I can't get the children. The large farmers get them. My farm is the furthest from the town. The children in Prickwillow don't go any distance. The farmer who occupied Mr. Long's farm before him used to have a large gang.

293. *Mrs. Sindall,* farmer.—I am now employing a few women for hoeing and weeding. They are the wives of my own labourers. They work by themselves. I used to employ Leggett's gang, but I don't think I gained by him. He charged me a high price for the hands he brought, and didn't keep them at work. He used to be playing with the children and telling them fortunes instead of working. The man before him was worse than he is. He charged 2*s.* a day for himself and then got some more from the children. I asked some children what he gave them, and found that he charged me 1*d.* and 2*d.* a day more for some of the little ones than he gave them. He could not do this with all, as the women would not work under 10*d.* a day. I think the women do the work better alone.

294. *Mr. Charles Day,* farmer.—I generally have a gang of about 10 women and children on my farm. They work without any man with them. I go to look after them occasionally myself. Besides these I want extra hands for weeding and twitching sometimes. I shall have the gang from Prickwillow, if I can get them; if not, I shall get a gang from Soham. Soham is four miles off; but my farm runs up that way. I should employ the gangers, but I should see that the children got the wages I paid for them. I sometimes put the work out to the ganger. I put hoeing out to both men and women.

295. *Mr. John Cobbin,* farmer.—I farm about 90 acres. I have three women and three men hoeing and weeding. I never have a gang; I don't approve of the system. I think it is bad for the children. They are left to play about the fields, and a deal of harm comes of it. Both the gangers about here have been drinking men. It is better for the farmers to have the children themselves and put one of their own men with them.

ISLEHAM, pop. 1,925. 296. *Mr. J. Robins,* farmer. —There is no common gang in this parish. Children are employed and paid by the farmers themselves. More than half the land is fen land. On a farm of about 300 acres about 10 women and children would

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be employed in a gang under one of the labourers; they would be employed from the beginning of May to the end of June. Hoeing is done by women here, but not so much as in other places. Wages are now 10*s.*; in the winter they were 9*s.* Hoeing and mowing is done by the piece; hoeing is paid 2*s.* an acre. Women get 8*d.*, in haytime they sometimes get 9*d.* Children get 5*d.* to 8*d.* Labour is very plentiful. Our poor rate has been 4*s.* 9*d.* and 5*s.* in the year. I generally put a woman over my gang; it is common in other farms to put a woman over the children.

SOHAM, pop. 4,285; acreage, 12,700. 297. *The Rev. H. Tasker*, vicar.—A considerable alteration has taken place in the habits of the girls in this parish during late years. Formerly no girls could be got out of the parish for service; all the children worked in the fields. Since we have got our schools better attended we are able to send out a great many girls into very good places. There are still however several gangs at work in the parish. There are 14 separate gangs. One farmer only employs boys. The largest gang is 27. Most of them are about 20. The smallest number now out in a gang is about 12 or 14. In the large gang there are 15 females and 12 boys; of the females three are above 18, four between 7 and 13, and eight between 13 and 18; of the boys, about four or five are 13 or 14 years of age, and the rest between 7 and 13. There are very few married women and very few boys above 14 in these gangs. We find the attendance at our girls' school much the same in the summer as in the winter. Many girls get into service at 13 or 14 years of age. About 30 years back, before I came, there were several dame schools, but no parish school for girls.

297A. *Extracts from the return sent to the Commission by the Rev. Henry Tasker, Vicar of Soham, dated the 19th of May* 1866.

(2.) The aggregate number, male and female, is about 270. The greatest number are employed in April, May, and June.

(3.) Ages of persons so employed:—

	Males.	Females.
Under 7 years of age -	0	0
Between 7 and 13 -	85	25
Between 13 and 18 -	50	60
Over 18 - - -	0	40 unmarried. 10 married.
	135	135

(4.) They commence at the end of February or early in March, and continue hand weeding till the middle or end of June, or even later sometimes, according to the season.

(5.) Some go as far as four or four and a half miles, but from the farm at the longer distance they send a waggon for the gang in the morning, and send them back in the evening.

(8.) The treatment is good. Most of the leaders of the gang are respectable men.

(9.) In most of the gangs the sexes work together, but in some they work apart.

(11.) Not so low as might be expected. Many of the boys, and a few of the girls, are taken from the schools. In all these instances the progress of education is of course seriously injured.

(13.) The moral influence of the system upon the females is of the worst kind. It often leads to their utter ruin; and although, of course, the evils are much aggravated when the leader of the gang is a man of disreputable character, still, even under the most favourable circumstances, the influences of the system are most demoralizing.

298. *Miss Betts*, mistress of the girls' National school.—During the last six months we have lost eight girls from school for field work. The eldest of these girls was 15, the youngest was 8; they were most of them about 9 years of age. I think that we lost more last year.

299. *Mr. Robert Tebbutt*, farmer and builder.—I have resided 47 years in this parish. Women and children are generally employed on all the farms at this time of the year. The women generally work in threes or fours, without any ganger; they are principally employed at hoeing; they are paid day wages. In June these women will be weeding. Their wages are 10*d.* a day; they are always the same. Men's wages are 1*s.* 8*d.* a day. Horse-keepers get 11*s.* a week. Very little work is put out. There are several farms about of 300 and 400 acres. They vary from 250 to 700 acres. Gangs have always been employed in this parish. I think the number of gangers has increased lately, and that the number of children employed in them also is larger. The farmers like the gang system; they get their work done cheap. Many of the large farmers always employ the same ganger from year to year. The gangs are not confined to one farm. The land is particularly rich here. I should say 50*s.* an acre would be the average rent. The land is not fallowed; that is one reason why there is so much weeding and hoeing to be done. The whole of the land is cropped, and all has to be weeded. The twitching is all done in the autumn. When the land is first ploughed up two children follow each plough to pick it up, and again when it has been harrowed or scarified the twitch is raked up, and a gang is put on it to pick it up; that would go on in October and November. There are not many roots grown here; few children or women are employed at this. The land, generally speaking, is only weeded once; sometimes twice. There are very few cottages on the farms; all the labourers live about the town. Some of the land is three miles and a half off. There is one farm four miles and a half from the town. Many of the labourers working on this farm go from the town. The gangs employed on this farm also come from this town. The custom here is to pay the ganger 2*s.* a day; he pays the children. I do not think that the ganger makes any profit out of the children; their wages are 4*d.*, 5*d.*, up to 8*d.* It is not customary to let any work to the gangers. There is an abundance of labour here. Men are out of work in the winter. Wages were only 9*s.* a week last winter. The children are all employed in the gangs by the gangers. Sometimes, but very rarely, a farmer might have two or three children apart from the gang for picking twitch. I don't think that there are so many girls above 15 in the gangs now as formerly. It is a common thing for small tradesmen to have a girl of 14 or 15 years old; their wages would be 30*s.* to 2*l.*

300. *Mrs. R. Hitch*, wife of labourer.—I have five children at home. My husband is not in regular work. All my children are out at work; they are two girls and three boys. Their wages are these:—

My eldest girl,	19 years old, earns	10*d.*	a day.
„ eldest boy,	17 „	2*s.*	„
„ 2nd girl,	15 „	8*d.*	„
„ 2nd boy,	11 „	7*d.*	„
„ 3rd boy,	9 „	6*d.*	„

My husband gets 1*s.* 8*d.* a day when he is at work for a farmer; he gets 1*s.* 2*d.* a day on the road. There is no piecework to be got here except claying.

301. *Sophy Hitch*, daughter of above.—I am 19 years old. I work separately now. I have been hoeing. I get 10*d.* a day. There was another woman with me; she was married. We are obliged to stop at home when it is wet, because we cannot hoe when the ground is wet. I queech and weed. In the winter I dressed corn. I turned the machine. I began hoeing in February. I shall work till the middle of June. I began to work when I was about 8 years old. I went in Johnson's gang. I was in a gang last summer. There are a good many girls of 18 or 19 in the gangs, and young married women. The elder ones have 10*d.* a day. I have never gone very far to work. The farthest farm I have worked on is Northey. I went there for a fortnight. We started at about 20 minutes to 7. We got to the field at about ¼ to 9. We got home about half-past 8 or 9

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in the evening. We left off working at half-past 5 or 6. The rule was to leave at half-past 5. The gangs that work at Northey are generally brought home and taken out in a waggon. There were 19 of us; they were boys and girls. The ganger went with us, and came back with us. We were queeching and burning. The little children go the long distance just the same as the others. I, one younger sister and brother, have been four or five years at work, and one brother began last year. This year they began in the gang at the end of March; they will work after harvest at queeching and knocking manure. It is understood that the ganger should always employ those who join his gang. There are generally about 12 or 14 in a gang.

302. *Mr. J. Benson*, superintendent of the county police, Newmarket.—Besides the case which was tried at the last assize I do not know of any other particular case showing immoral conduct on the part of gangers, but I know that in Soham the general opinion is that a great deal of actual immorality does take place in connexion with the gang work. I speak from conversations which I have had with persons in Soham, and also from my own observation. It is, of course, very difficult to get definite information as to these practices, except when some magisterial case arises out of them; otherwise it is no one's business to inquire into them. The gossip of the town is all that one can get.

303. *John Hobbs*, inmate of the Newmarket Union house.—I lived in Soham. I have been in habit of taking out gangs of children and women for about 37 years. I left Soham about two years ago. I was at work with gangs five years back. I was generally employed by one farmer. I used to go into the barn in the winter. I should say that 8 was the youngest age at which children began to work, as a rule. I have had 18 at once for queeching. I used to get children from Isleham as well as Soham. I took the greater part of the work. The boys were never over 12 or 13 years of age. The girls were often 16 years of age, and older. Women worked in the gangs. I got 2*s.* 6*d.* a day for myself. The regular wages were 10*s.* a week.

304. —— *Slack*, inmate of the same Union house. —In my father's farm at Soham, which was over 800 acres, we could find employment for 33 children for six months every year. Children of 10 years of age and upwards were employed at hoeing. Nearly half the land in the parish was cleaned by gangs every year. The youngest children twitched. There were only four permanent gangers. The ganger always got 2*s.* extra per week when he did not take the work. The common way of getting up potatoes was to let it to gangers. Women dug them up, and children picked them. The mangold getting also was generally let. Queeching and weeding was also let. In the fens dibbling wheat was sometimes done by gangs, when the land is flaggy. Some people said that bad things went on in the fields.

FORDHAM, pop. 1,507, acreage 4,050. 305. *Extracts from the return sent to the Commission by the Rev. John Bell, Vicar of Fordham, dated May* 1866.

(1.) The system exists. A labourer has under him from 15 to 20 children varying from 8 to 15 years of age. On some farms only boys, on others both sexes. They are employed in weeding and in the winter half-year the children, without any leader, collect stones from the land and sell them to the surveyor to repair the roads.

(2.) Number of persons so employed.—About 120, at the spring and early summer season.

(3.) Ages of persons so employed.

	Males.	Females.
Under 7 years of age	0	0
Between 7 and 13	34	26
Between 13 and 18	25	20
Over 18	0	12 unmarried
	59	58

N.B. 24 married women beside the above are employed as field-women but not in gangs.

(6.) Hours of work.—The boys from 6 a.m. to 6 p.m. with half an hour for breakfast and one hour for dinner. The girls from 7 a.m. to 6 p.m. with same time for meals.

(8.) Treatment.—Generally very kind.

(9.) The sexes work together.

(10.) Influence of employment on the physical condition.—Beneficial. The fresh pure air of the land contributes to the health of the population.

(11.) The education is by no means inferior to that of the villages around. There is a good school with an average of 100, and a night school in winter averaging 35.

(12.) The morals of the females are certainly not so good as they ought to be.

(13.) In this village there is difficulty in finding employment for the labourers. This leads to a desire on the part of the parents to have their children employed whenever opportunity offers. By these little earnings subscription to the Clothing Club, school pence for younger children, &c. are often procured. It certainly conduces to rudeness and coarse levity among the young girls. The older women go out less than formerly, many preferring needlework in the shape of making men's winter and summer overcoats.

The information is collected with great care by a Bible woman well acquainted with the village.

Two farms have women as leaders. The rest have men at the head of the gang. If treated unkindly the children are ready to threaten to bring the gang leader before the magistrates. This keeps down all cruelty. The children are eager to go to work in this way, and so are their parents.

I should imagine Fordham is an average village in this county. The land is productive and the farming clean and generally good.

BURWELL, pop. 2,000. 306. *The Rev. J. W. Cockshott*, vicar.—I have sent returns of the children employed in my parish to the Commission. This parish is partly fen and partly high chalk land. I found the gang system established here when I came, about seven years since. The population of the parish is 2,000. There are three schools connected with the church, attended by about 160 children. The number of children attending the boys' school is much diminished in the summer. The school in the fen is most affected. The number in the school will vary from 60 to 30 during the year. As evidence of the effect of field work on education I may mention the fact that at the last County Examination several of the girls in one of my schools were distinguished, and one got the first prize, while not a name has been recorded of those who went up from the fen school. The men's wages now are 11*s.* a week. The gangs are drawn chiefly from the poorest families. The majority of the children in school do not go at all. Most of the gangs are confined to particular farms. The effect of the gang system is to exclude a large number of children altogether from the christianizing influences of the school.

306A. *Extracts from the return sent to the Commission by the Rev. J. W. Cockshott, dated the* 1*st day of May* 1866.

(1.) The system of employing young persons in agricultural labour is to place 10 or 15 under the influence of a man who is possessed of the power of making children work. The number of gangs is five.

(3.) The range of ages is from 8 to 15. The proportion of boys a little exceeds that of girls.

(4.) They are employed in weeding the corn in the spring and early summer.

(8.) Treatment.—Often very harsh.

(9.) The sexes work together.

(10.) The worst possible influence on the physical condition of the children employed.

(11.) The children employed in gang work are the most ignorant and depraved in the parish.

(12.) The moral condition is most unsatisfactory. Parents own that nothing but absolute poverty would

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drive them to allow their children to be exposed to the evil influence of the gang system.

(13.) I cannot very well get at the precise age of all employed. I know, however, that children are employed between the ages of 7 and 8. Unless the Government of the country will interfere for the protection of this most degraded class of our agricultural labourers (I mean those employed in gangs), I see no prospect of producing anything like a decided change through the influence of our schools. The farmers for the most part care little or nothing for the education of the poor, and, as a rule, the most ignorant are better employed than those who are trained for a short time in our schools.

307. *Mr. Charles Arber.*—My land was formerly much more covered with charlock than it is now. For some years I used to employ several children and women to pull this weed out. In one field I paid 25*s.* an acre for this work. I had women and men at work. Now I have had two women and a man pulling charlock, and it has only cost me 10*s.* for the three acres. There is not a hundredth part of the charlock growing now what there was. I think children are cheaper. Two children at 4*d.* a day would pull more than a woman at 8*d.*

SWAFFHAM PRIOR, pop. 1,285, acreage 5,297. 308. *Extracts from the return sent to the Commission by the Rev. Thomas Preston, Vicar of Swaffham Prior, dated the 22nd day of June* 1866.

(1.) Every employer has his gang, in some cases two or more have one between them. The large gangs contain 20, and the smaller from six to 10. The are composed of children of from 10 to 15 years of age, male and female. All the children of labourers are so employed from 9 to 14 or 15 years of age.

(4.) They are employed pulling charlock and other weeds about three months in the year, viz. April, May, and June.

(8.) A man is appointed "guide" over them, and sees they do their work.

(11.) Of course the three months employment is so much lost time to education.

(12.) Moral condition.—Disastrous.

(13.) The system is, I think, capable of regulation.

WICKEN, pop. 1,000, acreage 3,813. 309. *Extracts from the return sent to the Commission by the Rev. C. W. Francken, Incumbent of Wicken.*

(1.) One gang exists in this parish.

(2.) (3.) Number and ages of persons employed.

	Males.	Females.
Under 7 years of age	0	0
Between 7 and 13	25	15
Between 13 and 18	10	15
	35	30

(9.) The sexes work apart.

(13.) The overseers in this parish are generally moral and religious characters, and have wholesome influence on the conduct of the children. Otherwise the consequences are baneful and dreaded by parents.

SHELFORD, pop. 1,000. 310. *The Rev. A. T. Crisford,* vicar. — We have nothing of the gang system about here,—meaning by that the practice of employing a man as ganger, leaving it to him to hire and employ the children. Children are employed in this parish to weed corn, single mangolds, pick twitch, &c. When so employed they are under the superintendence of a respectable man. They are the farmer's own labourers. I I know them all. The farms in this parish would average 300 acres. When children are thus employed they speak of working in a "class." I never heard the term gang applied to them. There would be about nine or ten together; the man would be working with them. Of course such employment interferes with their attendance at school, but I do not think that any harm is done to their moral character by the work. In the case of poor families the earnings of the children are really required.

311. *Mr. Harwood,* master of the National boys' school.—The number of boys on my books is 65. There were 40 in attendance last Friday (June 12.) I do not think that there are more than six boys belonging to the school who are absent owing to field work.

312. *George Moore.*—I am 10; my birthday is the 18th of March. I was out queeching in the spring; there were six of us, three girls and three boys. I was the eldest. Mr. Downs looked after us. He was the farmer. He paid me 2*s.* a week. I worked for four weeks. This is the only time I ever worked. I have just come back to school.

313. *Daniel Douce.*—I am 9. I was out twitching in May; I was also stone picking in the winter time. There were six boys altogether, no girls. My grandfather looked after us. I never went out before that time.

314. *Mrs. Kimpton,* mistress of the girls' National school.—The number of girls on my books, including infants, is 78. There are now eight away whom I believe are at work in the fields.

315. *Bessy Jennings.*—I am 7 and 2 months old. I went out squeeching on Mr. Denny's farm. There was a man looking after us. There were seven with me. There were none younger than me. I was paid 4*d.* a day. I had a sister with me, she was going 10. She got 5*d.* She is spudding thistles. There are five of us at home. Father is in regular work. We began to work at 8, and gave over at 6. We went home every day for dinner.

COTON, pop. 311. 316. *Rev. F. J. Jameson.*—The population of this parish is about 300, and the acreage 900. Children are not employed in gangs, but do work in the fields, particularly at picking twitch and weeding. They are mostly employed in the summer. They generally work with their parents.

BARTON, pop. 324. 317. *Mr. Richard Rowley Holben.*—I have now nine children twitching; they are under one of my labourers; he is an old man whom I always employ for this work. I pay the children myself. The youngest get 4*d.* and the bigger ones 6*d.* a day. The eldest girl is about 12 or 13. The boys are younger than the girls. I employ the same children for weeding and picking charlock. I have never more than nine together. I have two lots sometimes. I should only have these children during the spring and early summer, *i.e.*, during the months of April, May, and June. My farm is 800 acres. I could not get more children if I wanted them. I do want more for picking charlock. The farms in this district are nearly all between 200 and 500 acres. There are several of 400 acres. I should say that all these farmers employed a few children in the same way as I do. Women are very seldom seen in the fields here; they object to work. They consider it the best economy to stay at home and look after their houses. Women's wages would be 8*d.* a day. The custom is for the children to leave their homes at 8.30, and to leave the field in the evening at 6 o'clock. They always have an hour and come home at dinner time. There are no travelling gangs at all in this neighbourhood. Labourers' wages are 12*s.* a week. The charlock grows very freely about here. It is not found on red land. It ought to be kept down. The common practice here is to cut off the flower; the reason why this is done is that farmers cannot get children to pick it up. I should say there might be so much charlock in a field of corn as to make the difference of half the quantity produced. Probably many of the fields which you have seen yellow with charlock have been hoed. The men do not like to have children weeding with them when they hoe. I have asked my men to take children to weed the drills; they have refused, and said they would wish to have it done by the children afterwards under a man to look after them. They will not take children with them here even for singling turnips. We do not employ children here to single turnips. What is done is done by the hoe.

Cambridgeshire.

Mr. F. D. Longe.

a.

Women never hoe here. All the labourers in this parish are in regular employment throughout the year, winter and summer. We never have any girls working above 13 years of age; they go out to service then. We make a point of not employing them after that age. The children employed are generally about 7 to 12 years old; those of the poorest families.

GAMLINGAY, pop. 2,004, acreage 4,375. 318. *Extracts from the return sent to the Commission by the Rev. T. B. James, Rector of Gamlingay, dated the 20th day of June* 1866.

(1.) In the spring bodies of children, boys and girls together, numbering from six to 20, are employed by men who contract to keep fields clear of weeds.

(2.) Ages of persons so employed.—From 5 years upwards.

(5.) They work three or four miles distant, some much nearer home.

(6.) Hours of work.—From 6 a.m. to 6 p.m.

(9.) The sexes work together.

(13.) The gang system is always productive of evil.

Bedfordshire.

BEDFORDSHIRE.

WOBURN. 319. *Mr. Richard Stephens*, superintendent of woods to the Duke of Bedford.—It has been for many years the practice on this estate to employ gangs of boys in the park and on the farm, and for upwards of 20 years I have had a gang of boys in the woods and nurseries. The gang under me varies from 12 to 20. The boys work under the superintendence of a foreman. The same man is always employed. They are employed in weeding, cleaning trees, planting, &c. We require that these boys should be of 9 years of age at least, and able to read and write. We do not require any certificate to prove these qualifications. I never examine the boys. They are generally known to the foreman before they are taken into the gang. They are generally the children of labourers employed on the estate. Some years back a schoolmaster was employed to give them instruction for two hours every morning from 6 to 8; this was only done for a short time; it was soon discontinued; I do not know why.

The hours of work are from 6 to 6 in summer, and while it is light in the winter; that would be from about 8 to 5. They have half an hour for breakfast, and one hour for dinner. On every other Saturday they break off at 3 in afternoon. They are paid on these Saturdays. Wages are paid every fortnight. The boys receive their own wages. The boys in the park gang and in my gang are paid 2*s*. 6*d*. a week. The boys in the farm gang are paid 3*s*. a week, with an increased wage in hay time and harvest.

The boys in my gang are generally taken from the boys in the park gang, which are the youngest, and selected by the park foreman, as he knows all the families round about the park.

The boys for the farm gang are generally selected from my boys, and are the oldest.

There would be from 30 to 40 boys in the park gang, and from 20 to 30 in the farm gang. The total number of boys employed in these three gangs would be between 70 and 80, and of ages generally between 9 and 15. They come from Woburn, Eversholt, Milton, Pottesgrove, Aspley Guise, Ridgmount, and Crawley; these parishes are all adjoining the park and farm. The boys are required to meet at 6 o'clock, from whatever part they come, and leave off work at the same time.

The ordinary wages of labourers about here are 11*s*. and 12*s*. a week. Horsemen have 2*s*. extra. Women and girls are never employed in the fields here. They work at home at straw plaiting.

Several farmers about here have small gangs of boys. The boys employed in the gangs on this estate are well looked after. The overlookers are superior labouring men, selected for good conduct; they are paid a little higher than the ordinary labourers. The boys get higher wages as they improve.

N.B.—The following boys were employed in the park gang in the month of August 1866:—

		yrs.	mos.
George Willis - -	aged	9	2
George Oakley - -	„	8	8
Thomas Cooke - -	„	8	5
Benjamin Taylor - -	„	9	5
John Banker - -	„	9	3

REPORT upon AGRICULTURAL GANGS.—By Mr. J. E. WHITE.

TO HER MAJESTY'S COMMISSIONERS.

Agricultural Gangs.

Mr. J. E. White.

B.

GENTLEMEN,

1. THE inquiry into the subject of Agricultural Gangs which I was directed by you to carry out, and the results of which I now have the honour to lay before you, has been one of some difficulty, not, however, from any unwillingness on the part of persons to whom I applied to impart information, but chiefly from the nature of the subject itself. Members of all classes have shown the utmost readiness to supply information, and to forward my inquiry by all the means in their power, and more especially the clergy, to whom from the nature of the case I was obliged to apply very largely, and for the kindness of whom, as of others, I here wish to express my acknowledgments.

Uncertain limits of the subject.

2. One chief difficulty arising from the nature of the subject was this: I very soon found that though a form of employment exists which is recognised by all as coming under the term or description of the "gang system," it is so shaded off into and mixed up with other forms of agricultural employment, which by some persons are regarded as part of the same system and by others not, that it was hard to know at what point to draw the limit of my inquiry.

Uncertain locus of gang.

3. Another cause seems to have led to a difficulty in answering the question, which might at first seem simple enough, as to the existence of the system in any given place. Some seem to consider

that the system exists in a parish if a gang is ever employed on the land of the parish, though the entire gang comes from another parish; others, if some of the inhabitants of a parish work in a gang, without reference to the place in which it is organised, or in which it is employed; and others, only if the gang-master lives in the parish and organises his gang there. It may, however, happen, though it is not likely to be often the case, that the gangmaster lives in one parish, and gets the mass of his hands from an adjoining larger parish. He frequently, however, draws some of his hands together from different parishes near. Sometimes, but not always, these facts are pointed out. Hence the answers cannot be taken as all given on one principle, and an element of uncertainty is introduced, but one which does not practically affect the affirmative answers, for in all these cases there must be a gang in existence formed from the parish, or from some one or more parishes in the neighbourhood.

Prejudice against gangs.

4. Another difficulty was, that previously to the time of my inquiry the gang system had been the subject of much discussion, and in some quarters of severe condemnation, which has apparently led some to think that its alleged evils have been exaggerated, and its necessity or advantages not fairly considered, and others to be unwilling to recognise its existence in their own place or neighbourhood. The word itself unfortunately has got a bad name, and seems thought to imply something objectionable. A magistrate and employer remarks, "The name 'gang system' puts one much in mind of "Newgate, and I believe if it were called the Agricultural Juvenile Industrial Self-supporting "Association it would lose much of its odium." Accordingly, some persons speak only of "companies." For convenience, however, I use the word "gang" throughout for an agricultural company of any kind, whether large or small, public or private, simply as the shortest and most commonly understood name, and one in itself quite harmless, and I hope that my use of it will be so understood.

Importance of subject.

5. The consideration which the subject, as I am informed, has received at different meetings of clergy and employers also, is a proof that it is thought one of considerable importance, and as such it was referred to by the Bishop of Ely in a late charge, in which he described the system as a "great evil," and injurious to the bodily health, and still more dangerous to the spiritual health of the children.

Conflicting statements.

6. These causes seem the most probable account of the conflicting statements which I have in many cases received as to the existence or non-existence of the system in the same district or place. A common answer to inquiries as to the existence of the gang system in a given place has been that no such system prevails, but often modes of employment have been at the same time described or referred to, which in substantial points agree with what is found under the recognised gang system, and which would be included in any reasonable definition which could be formed of gang employment; or from another source it was stated that the system did exist.

Definition of gang.

7. What is commonly understood by all as coming within the meaning of the term "gang system" is where a person engages a number of workers, chiefly children and females, for the purpose of employing them in field work on the land of any farmers who may require his services, not being himself in the permanent service of any master, but following the business of overlooking such workers as an independent profession, and being hence known by the name of gangmaster or ganger. This person is commonly a man, but occasionally a woman. The gang so employed is commonly spoken of as a "public," or sometimes as a "travelling" or "tramping" gang.

Public gang.

8. Some persons add, that to constitute the gang system properly so called, the gangmaster must also be a middleman, but this view does not seem tenable. He does indeed often, but by no means always, stand in this position. Very often he is paid fixed daily wages as a simple overlooker, and fixed daily wages are also paid by the farmer for each worker, which are supposed merely to pass through the hands of the gangmaster, and be paid over in the full amount by him to the workers. The details of the different arrangements as to the relation between employers and employed will be given under the head of "Hiring." It is the "public gang" which is the object of this inquiry.

9. A definition of a gang approved by some large employers is, "a company of persons, women, "girls, or young boys, separate or mixed, doing farm work under an overlooker, or in reality a middle-"man, who follows this occupation as in an independent business, and makes his living by it" (No. 68).

Size.

10. The number of workers in such a gang varies in different cases or at different times from the smallest which it is worth a man's while to give his time to to the largest that he is able to superintend properly, *i.e.*, commonly from 12 or 15 up to 25 or 30. In winter the number is usually less than in spring and summer, often by about a half, and often the gang is then given up altogether. On the average, in the season of full work, from about 20 to 25 is a fair sized gang. A gangmaster often has many more workers in his employment at the same time, as 40 or 50, and, in rare instances, up to 70 or 80, and even 100. But in such cases he commonly divides them into separate gangs employed in separate places, it may be miles apart, each under the charge of an assistant overlooker. He may draft off as few as half a dozen under the care of a woman. Or for special purposes he may have all his forces in line. One had 55 thus, and another, with his son, had 99 in two parties in the same field.

Private gang.

11. There is another kind of gang commonly spoken of as a "private gang," but which some persons do not consider a "gang" at all, and most make a distinction between this and a public gang. A private gang is one which works only for one farmer, who employs one of his own permanent servants as an overlooker of it. In other respects, the employment of these gangs resembles that of public gangs. In some cases private gangs are kept up almost permanently, or as nearly so as circumstances will permit, but very often they are formed only for temporary purposes and then discharged. They are commonly smaller in number than the public, say from six or eight to 20 or 25.

Resemblance to common farm work.

12. It is hard to draw any clear line between small private gangs and the ordinary forms of agricultural employment. A public gang cannot fail to be recognized as a gang, because it is not worth a man's while to be an independent gangmaster unless he has under him a fair number of workers, and can find employment for them for periods of some length. This does not apply where the overlooker is a man receiving regular wages as the private servant of a farmer. Hence workers may be engaged under him in so small numbers and for such short periods, that the collection of workers scarcely acquires a name. But where children are employed in field work in any number together, however small this may be, it becomes necessary to place them with and under the eye of some adult, and nothing but fixing an arbitrary limit of number could distinguish these cases from those of private gangs on a larger scale.

It appeared to me, however, that though it was important to bring this fact to your notice, a regular and extended inquiry into such employment on such a small scale, which might probably be found in many parts of the country, was beyond the limits assigned to me.

13. It is necessary to refer to the vagueness which thus attaches to the meaning of the word "gang" before showing the mode of inquiry which I pursued, and the results obtained, as this vagueness leaves it in some degree uncertain how far the extent of the actual employment of gangs in agriculture was ascertained.

Mode of inquiry pursued.

14. It was clear at the outset that, owing to the scattered nature of agricultural employment, it would be impossible to carry out the inquiry by means of mere personal visits, or even by addressing written inquiries to all the places lying in or near districts in which the employment of gangs was known. The help of some local knowledge was necessary as a preliminary guide.

15. It appeared that this could be best obtained, in the first instance, from the clergy, as not only combining an official position with local knowledge, but affording in each district or parish persons whose name and address were the easiest to learn, and at the same time not directly concerned with the employment in question, and as also having the best opportunities of furnishing the required statistics.

16. Accordingly I addressed inquiries to the Rural Deans in the district in which the main part of my inquiry was made, viz.: Norfolk, Suffolk, and the northern part of Cambridgeshire, requesting them to furnish me with the names of the parishes, if any, in their respective deaneries in which the system of organized labour, referred to in the circulars which I enclosed, existed.

17. With regard to this mode of inquiry, it may be remarked that though the clergy as a body are only indirectly concerned with agricultural employments, and less able than employers to judge of the necessity or value of different modes of employing labour, still the employment of the young, in its bearing on their education and moral condition, is a matter which is constantly and forcibly brought under their notice, and to which they have given much thought, especially in those districts in which this employment prevails in an organized form, and therefore to a greater extent. The Rural Deans in particular, from the nature of their office, are likely to have a more general knowledge than their neighbours as to their district, and have opportunities of obtaining from them more special information. They are also naturally men of standing and position in their neighbourhoods, and their opinions, where expressed, seem so far entitled to some additional weight.

Extent of inquiry.

18. The Rural Deans with whom I communicated, by letter or in person, were upwards of sixty in number. The districts of such of them as are in the diocese of Norwich include upwards of a thousand parishes, exclusive of parishes in the large towns, Norwich, Ipswich, Yarmouth, and Lynn. I have no data as to the number of parishes included in the remaining districts, but they probably amount to a few hundreds more.

19. Replies were received in nearly all cases, some of them made after special inquiry for the purpose, and others apparently on the general knowledge of the writer, the latter chiefly in those cases in which the gang system was believed to prevail, if at all, not to any important extent, and in which accordingly no places were pointed out. About half of the replies were to the effect that the gang system either did not exist in the writer's district, or existed only very slightly. A very few, while making returns as to gangs in their own parishes, made no answer as to other parishes in their deaneries, and from a very few no answers were received.

20. The information, however, given as above, coupled with what I obtained in other ways, seemed amply sufficient to point out the chief seats of the employment, and I did not think it necessary or desirable to make further inquiries in districts or places in which there appeared no likelihood of finding the employment prevailing to any considerable extent. Any places thus omitted are doubtless more or less sufficiently represented by some or other of the places of which accounts are given.

21. Accordingly I issued Circulars, including the printed Form of Questions to the Incumbents of parishes in the district above referred to, or elsewhere, in which I was informed from any source that gangs were employed, and also to a number of persons in the same or other places, employers and others, likely to be interested in the question, or to supply practical information or views upon it.

Returns.

22. In these ways I distributed upwards of 270 Forms of Questions. To many of these, as you are already aware, very full and careful answers were returned, chiefly from the neighbourhoods in which the gang system is best known; to others the answers were less full, but still embodying a large amount of information from independent sources; while to some the answer was that no such system existed, and to some no answer was returned. I have referred to the circumstances owing to which even a statement that the gang system or gangs do not exist in a parish is not conclusive of the non-xeistence of gang employment, or something closely resembling it, in the parish.

23. As the information and views contained in these Returns form an important part of the evidence which I have been able to obtain, I have set out in the Evidence subjoined a number of these Returns or such extracts from them as afford a fair representation of the whole, and of the varying facts and opinions obtained from different persons and places. I must remark, however, that many of the opinions contained in the Returns or expressed to me in letters or otherwise as to evils arising from the gang system, especially in a moral point of view, are even more strongly expressed than any which are set out. The circumstances of the case admitted of and required a large amount of correspondence.

Seat of gang system.

24. From the results which I obtained it appears that the gang system prevails over all the part of Cambridgeshire which came within my district, *i. e.*, from the northern point to about the line of Whittlesea and March; over a great part of West Norfolk, and some adjoining parts of East Norfolk; and over part of Suffolk, but very little in the Western part. I also obtained information as to the employment of gangs in a few places in other counties, viz., in the northern point of Northamptonshire, adjoining the Cambridgeshire gang district, in Rutland, Nottinghamshire, Bedfordshire, and an isolated case of a private gang on a nobleman's estate in Staffordshire. I, of course, exclude those districts which fell within the range of Mr. Longe's inquiry.

25. I have made inquiry of persons acquainted with various other parts of the kingdom, whether they were aware of the existence of any such system in those parts, but I could not learn of any, and therefore had no starting point for any more general inquiry.

26. I should remark, however, that in the Poor Law Report on the employment of women and children in agriculture (1843), it appears that boys and girls were stated to work together in several places in Yorkshire and Northumberland, and in some cases are described as working in gangs or companies, or under superintendence. From the nature of some of the land and crops, and from the remarks in the Sixth Report of the Medical Officer of the Privy Council as to the employment of women there to "an amount unknown elsewhere" (p. 456), it seemed natural that the practice should still exist there; but, from the answers which I received to a few inquiries in that part of England, it appears not to be the case.

Market gardens.

27. In a market garden neighbourhood also in Essex, I am informed that many children are taken from school for work in the busy working months; and, in the same direction, near Romford, where fields are now cultivated for market garden purposes, I was also informed of a few children working together under a man, at weeding, potato picking, &c., from which latter work I found a boy returning. As, however, the market garden employment in the neighbourhood of London was a wide subject to enter on, and did not seem to come strictly within the limits of my inquiry, I did not enter on the question. The employment of children in this work, whatever there may be of it, is probably represented by what I found in the neighbourhood of Wisbeach, in which vegetables and fruit are grown largely, and sent up, as I was informed, for the London market.

Connexion with other farm employments.

28. Early in my inquiry I found that a very imperfect idea of the actual condition of children who work in gangs—especially as regards their opportunities of education—could be given, without taking into account some other ways in which they are employed previously to, or in intervals of, their gang work. As a rule, the children who go earliest to work do not begin with gangs, and gang work is in most cases an intermittent employment, at least as regards the youngest children, who are chiefly engaged in gangs only at certain seasons, and at work for which they are thought suitable. To questions as to the age of beginning work, hours of work, education, &c., of children, put in connection with gang work, answers were naturally made relating to other work by persons who did not appear to recognize the importance of distinctions between kinds of work, which they regard as practically to them so much alike. Where, therefore, in the course of my inquiries as to gang work, evidence on such other work was brought before me, I thought it right and important to receive it, though from the limited nature of my instructions, I was not at liberty to seek for more general information on such points. Indeed, to do so in any efficient manner, it would, no doubt, have been necessary to extend the inquiry over the kingdom at large, as the employments in question are such as are probably found in all agricultural districts. What these other employments are will be noticed more particularly hereafter.

Arrangement of evidence.

29. With regard to the arrangement of evidence which I have made, I will remark that I have placed first that relating to Norfolk, in which my inquiry began: next that relating to Suffolk; next, that relating to Cambridgeshire; next, that relating to a few places in other counties; and lastly, evidence of a miscellaneous and general nature. The statement No. 1. is at some length and not confined to mere gang work; but, as it forms a complete and elaborate whole, it is given fully as it was furnished, and is put first as it may direct atttention to some of the details in the other evidence. For convenience the place of residence of a witness is commonly omitted where preceded by one or more witnesses from the same place, and in such case is that of the last preceding witness whose place of residence is named. The different places are commonly divided by lines drawn across.

30. I now proceed to notice the leading features of the employment under such of the heads marked out by you in the case of Trades and Manufactures as seem applicable to the present subject.

I. Age at which Children and Young Persons are employed.

Women and children.

31. Gangs are commonly said to consist either of children or of women and children, according to the practice of the neighbourhood described. Taking the word "children" in the popular sense, the account is correct enough.

Boys.

32. Boys leave gang work as soon as they can get work at which they can earn more or which they like better, and this, in most cases, is by the age of 14 or 15,—often two or three years earlier. There are, however, sometimes older youths, and occasionally men; but the number of males returned as over the age of 18 is very small. Of the males employed, therefore, by far the greater part are strictly children.

Females.

33. In many places the females are little, if any older; but in others there is no upward limit of age, women, married, unmarried, or widows, all working alike. Girls are regarded as children till they are old enough to work by themselves, or big and strong enough to do as much work and earn as much money as grown women,—a point which of course varies greatly in different cases, but is often reached by 14 or 15 years of age, and by most within a year or two later.

Children.

34. Speaking broadly, where gangs of children are spoken of, the period from nine to 14 years of age would include the mass of the workers of either sex in any given gang.

Age of beginning work.

35. The age of nine, however, does not represent the actual age of beginning the work as regards individuals. Some do not begin till 10 or 11, and girls sometimes older, but a large number begin as young as seven, and some at six; a few even at five. In one parish alone it is stated in the Return that there were then five boys in the gang under the age of seven years; two cases of boys under six years old are spoken to; and, on special inquiry, it was asserted, on what is represented as good authority, that six or seven cases of children as young are to be met with. It was thought that one of these, a child of five years old, was sent out to work thus early because he was an illegitimate child, "and so they thought "much of keeping him, and as soon as he could earn anything, he must."

36. I found one girl who had been sent out to work at four years old. The age was particularly noticed because she had to be carried by her father, the work being two miles off; and being so little, and left by herself for a while, she fell into some water, but was seen and pulled out in time. This was at work done by adults, helped by two or three children each, but for which gangs are also employed.

Age of workers varies.

37. The age of the workers employed, however, depends much on the season of the year, the particular kind of work which the gang master has in hand for the time being, and the mode of payment. The youngest children are employed chiefly in the spring and early summer, and at the lighter

kinds of work, so that the ages of the workers in the same gang may vary much, not only at different times of the year, but even in the course of a few days. Where, as is often the case, children are paid for by the score, the tendency naturally is to reduce their age, to which, however, some limit is fixed by the objection which the farmer would make if he found too low an average of age in the gang. Hence, when it is said that children have begun work at a very low age, it may often mean that they only went for a short time, such as a few weeks, in the busier season, when hands were scarcest and the work of a light kind; and they would probably begin regular work a year or two later.

Previous work.

38. Gang work, however, is often not the first work to which children are sent. "Keeping" or "tenting" of different kinds, noticed hereafter, is said to be generally the "first job," and very young children are employed at it,—quite as young as stated with regard to gangs. Girls are employed at this as well as boys, but not so generally.

39. Very young children are employed at hop picking, into which they get gradually, the mothers often taking their youngest children and babies with them for the sake of taking care of them; and a child must be very young indeed not to be able to help a little, without being strictly kept at it. In a hop garden in Hampshire a mother said that a child of three or four years old could do this, or, to use her figure, "a baby can pick," and that when old enough to be kept to it, children are encouraged by giving them some "lollies," or promising a halfpenny. A man in another part told me that his girl five years old kept at it all day, and could pick three bushels, or if the hops were good, *i. e.*, a full crop and close together, five bushels in a day.

Ages how ascertained.

40. This account of the ages at which children begin work does not rest on general statements, though several to the same effect by gang masters, workers, and others are given. But as in such a matter general statements are necessarily somewhat vague, and are liable to be not quite accurate, I made special inquiry of parents as to individual children of their own,—a method which seemed the least open to mistake,—besides questioning young children; and their accounts amply bear out the general statements. I did not find any children actually at work younger than seven, but from the uncertainty of the place as well as the probable long distance at which a gang was to be found at work on any given day, I was seldom able to see them actually at work. In one gang, however, I found two boys seven years old, and a girl eight that day, and another a few days over eight, and in another gang in the same parish a boy of seven.

Older workers join on.

41. At work suitable for older hands, it may sometimes happen that a gang, not itself containing adults, is working in company with women or men engaged by the farmer as independent workers.

II.—SEX. NUMBER OF GIRLS AND WOMEN.

Mixed gangs.

42. Either sex is employed indifferently. Where both sexes work together the gang is what is called a "mixed" gang. This is the more general form, especially in the case of children. The proportion between the sexes in any one gang varies to every possible extent. There may be a few girls with many boys, or *vice versâ*, or they may be divided about equally or in any other manner, either with or without women, married or unmarried. In winter the proportion of girls falls off, they being less suitable for rough weather, and the demand for labour less. In the case of one gang, in which in summer the sexes are about equal, I found late in October only one girl left with 15 boys.

Separate gangs.

43. Some gangs, however, are not "mixed," but consist either of boys alone, or of girls or girls and women alone. Successful efforts have been made in many cases to bring about such a separation of the sexes, on account of the moral objections entertained against mixed gangs.

44. The number of girls and women will be more conveniently treated of under the next head.

III.—NUMBER OF CHILDREN AND YOUNG PERSONS EMPLOYED.

Numbers employed.

45. From the nature of the case I cannot hope to give an accurate account of the numbers of each sex at given ages. In some cases the table of numbers and ages in the Form issued was carefully filled up with the details requested. In a great number of cases, however, persons found themselves unable to give these in full, and furnished instead an approximation only. This in most cases was done in such a manner as to enable an estimate to be formed as to the numbers in public gangs coming under each class, which will probably be tolerably correct when the numbers are taken in the aggregate, although in a few cases some were included who were employed in private gangs.

46. For this purpose, where what appeared sufficient data were given, I apportioned to each sex and period of age as fairly as I could the numbers in the Returns given for a large number of parishes, and have thus formed the table below. I should remark that it represents the numbers given for the gangs when fairly full. It may be that, owing to the circumstances referred to, where Returns were received from adjoining parishes, some of the workers from one parish may be included in the Return from another, but in forming the table this was avoided as far as the other information furnished allowed, and the error, if any, cannot, I believe, arise often enough or to such an extent as to have any effect of practical importance on the numbers. Also, as some persons work in a gang at some times and not at others, the number of individuals in a parish having some connexion with the employment is probably greater than is represented by the average or full number of the gang.

47. The following is the table referred to.

Number and Ages of Persons Employed.

MALES.					FEMALES.				
Under 7 years.	Between 7 & 13.	Between 13 & 18.	Over 18.	Total Males.	Under 7 years.	Between 7 & 13.	Between 13 & 18.	Over 18.	Total Females.
11	686	309	56	1,062	5	607	429	311	1,352

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48. In the Returns for a number of other parishes approximate aggregate numbers were given, but not in such a way as to enable me to apportion them individually in like manner. These parishes include three large parishes in which gang employment prevails extensively, and give an approximate number of not less than 600 persons, or as nearly as may be a quarter of the number included in the former table; and it is probably fair to assume that the sexes and ages, described chiefly as of women and children, are distributed in much the same proportions. I have therefore assumed this, and added a fourth part to each of the numbers given in the former table, making up whole numbers in some classes of one sex by the fractions remaining over in dividing the number in the corresponding class of the other sex.

49. This gives the result shown in the following table:—

Number and Ages of Persons Employed.

	Males.					Females.				
——	Under 7 years.	Between 7 & 13.	Between 13 & 18.	Over 18	Total Males.	Under 7 years.	Between 7 & 13.	Between 13 & 18.	Over 18.	Total Females.
	11	686	309	56	1,062	5	607	429	311	1,352
Add a fourth part	3	171	77	14	265	1	152	107	77	338
Total Males -	14	857	386	70	1,327	6	759	536	388	1,690
Total Females -	6	759	536	388	1,690					
Total Males & Females	20	1,616	922	458	3,017					
	1,636									

50. This estimate gives 1636 children under the age of 13 years, 20 of them under the age of 7 years, 53·2 per cent. of the whole being males, and 46·7 per cent. females, and 922 young persons between the ages of 13 and 18 years, 41·8 per cent. being males, and 58·1 per cent. females. The result, which it must be remembered represents in most cases only the time of average full employment, and would have to be reduced very greatly, though there are no means of determining how far, in certain parts of the year, may be put more plainly to the eye thus:—

	Children.		Young Persons.
Male -	871	Male -	386
Female	765	Female	536
Total	1636	Total	922
	922		
Total children and young persons	2558	Adult females	388.

51. It must be borne in mind that the above figures only relate to places from which there are Returns giving more or less definite numbers. The Returns from some places speak of gangs without giving any such numbers. There are also a number of parishes in which I have been informed that gangs exist more or less, but from which no account has been received, and there may, no doubt, be parishes having gangs, but of which I was not informed. It may be that in some of the places in which there were reported to be gangs, the employment may not exist in reality, or may be so slight or occasional that it was not thought worth noticing. A few, however, of the parishes from which no detailed returns have been received are places in which large numbers are employed in gangs.

52. It may be fairly assumed, therefore, that the numbers given above are some way within the actual numbers which would be shown by complete Returns from all places within the area of my inquiry in which gangs are employed.

IV.—Hiring of Children and Young Persons.

How hired.

53. The workers are hired at daily wages in the usual way, though, in effect, it often amounts to a kind of piece-work, the work being marked out for them and payment made according to the amount which they are thought fit to undertake; *e. g.* a child may be paid 1*d.* a row; "sometimes we were stinted." A regular gangmaster engages and keeps them together on his own account, in such numbers as he sees fit or can find employment for, and again places their labour at the disposal of any farmer who may require it for the time being, or, as the transaction is more shortly expressed, "lets them out."

Piece work.

54. The terms on which he does this vary much at different kinds of work or in different places. Often he what is called "takes" the work, *i. e.* undertakes it by contract, or "the piece" at a given price by the acre or load. This mode saves the farmer trouble and tends to get the work done quickly. Hence some farmers prefer it, but it is only some kinds of work for which it is found suitable, *i. e.*, those which cannot well be slurred over from haste, or in which this could easily be seen and remedied. Some farmers avail themselves of it much more than others, some employ it very seldom, if at all. The gangmaster commonly prefers it if he is a shrewd man and able to form a good estimate of the amount of labour required, inasmuch as he gets the benefit of all the profit which may remain after payment of his workers' wages. Some however say that they do not like this mode, as they sometimes find themselves out of pocket by it.

Profits of piece work.

55. There is no doubt, however, that a man with a good eye for quantities, experience in the capabilities of workers, and a faculty for keeping them well to their work, and who thus finds full employment for large numbers, will gain a large profit. One man of this kind, who is spoken of as one of the first to start or develope the system many years ago, and who told me that he had had as many as 100 women and children in his employment at a time, rose originally from this, and now farms 500 acres of land. In another county I was informed that a gangmaster had built a row of houses out of the money which he had made by his profession.

Piece work harder.

56. When work is "taken" or done by the piece, it is the interest of the gangmaster to get it done as quickly as he can, and the work is generally said to be harder than at other times. "The poor " children, as young as they are, always knows whether it is piece-work or not; as they say when it is " by the piece they are not allowed to (stop?) one moment to rest;" and occasionally the work is longer then.

Hiring by the score.

57. According to another system, the farmer pays the gangmaster for the children at so much, *e.g.* from 12*s.* to 15*s.*, a score. On this plan the profit of the gangmaster consists in the difference between this sum and the wages for which he can find the children, and of course the lower these wages are, the greater his profit. This, as already remarked, is likely to lead him to employ as young children as he thinks the farmer will allow, and if he has some older hands he must, as one remarked to me, have some younger ones to make up for them. This mode of payment, however, is convenient in saving the trouble of accounts, though being paid for in this way, perhaps, tends to make the workers regarded rather as parts of a living machine than as persons.

By the day.

58. A very general plan, however, is for the gangmaster to be merely paid by the farmer a fixed sum, *e. g.*, 2*s.* 6*d.* a day, sometimes more, sometimes less, for his services as overlooker, and for the wages of each worker to be paid by the farmer. The gangmaster keeps an account of the number of hands whom he employs, and the rate of wages to be paid to each, and shows it to the farmer, who thereupon pays the total amount to him merely to distribute to the workers at the rate named.

Gangmaster independent of employers.

59. In this case it may seem that the gangmaster is not really an employer, but that both he and his workers are in the direct service of the farmer for the time being. There is, however, no further relation than that of wages between the farmer and the workers. The gangmaster retains the actual control over them as much as under the former methods, and on finishing any one undertaking can remove himself and gang at his pleasure to any other employer. He is, in fact, frequently moving from one farm to another; and sometimes a gang having finished its work on one farm goes to work on another in the same day. The farmer is not thought responsible for the conduct and character of the gang; and if he feels such responsibility cannot effectually enforce it. Some regret this, but say that they must take the gang as they find it. The regular gangmaster, from his position, has the command of the children's labour, as he can, as a rule, find the most permanent employment for it.

His profits.

60. The profit which a gangmaster taking work by the piece expects to make is put by some at about 2*d.* a day on each child employed. The poor have sometimes an idea that, however he may be engaged, he gets part of what ought to go to the children, and statements are made to this effect, but this does not seem likely to be the case where fixed wages are paid for himself as well as for the children; and if it were the case it could not easily be known, the rates charged to the farmer being known only to him and the gangmaster. The latter is paid usually a little more than the wages of a common labourer, while he seems but slightly, if any, better off in his material condition. But even if a profit of this kind were made, yet if parents were glad to get 4*d.* a day for a child for whom the farmer found it worth his while to pay 6*d.* it would be hard to say that any wrong was done if the farmer was aware, as he probably is, what the real payment to children of the ages of those employed would be. The idea of the poor referred to above arises no doubt from their not distinguishing between the modes of payment, and their being unable to understand the fairness of any intermediate profit. There is also sometimes a feeling against gang-masters as getting "so upright and masterful over poor people," as a woman remarked to me, as well as making a profit by working their children hard.

Deductions from children's wages.

61. A small sum is, however, occasionally taken by the gangmaster from each worker's wages in a recognized way, he charging each 1*d.* a week in return, as differently explained, either for his "finding them the work," or for his trouble in paying them their wages, or in getting the money changed into small coin for this purpose. I found also an under-gangmaster, who gets 1*d* a. day from each child for ferrying them on their way to and from their work across a river, near which they start.

Seasons.

62. The workers are hired and discharged according to the work which the gangmaster or overlooker has for them to do. It is in spring that the employment becomes general, and it continues up to harvest, when it is to a great extent discontinued, and after harvest it is resumed again, and kept on till as late in the year as the season and the different nature of the work allow, only a limited amount of gang work being carried on through the winter.

Power of gangmaster.

63. The relation between the gangmaster and his workers is thus very much interrupted. Where there are several gangs the children work now in one gang, now in another, as they can find employment. Where there is only one regular gang, as is usually the case in villages of average size, the gangmaster has a sort of monopoly of children's work, and parents are unwilling to make any complaint, as indeed they appear to be in any case; and it is stated in one town where there are several gangs, that the masters hang together, and would resent any such interference by parents. A gangmaster sometimes refuses to take an elder child unless a younger is sent also; or, as one mother says, insists that a child shall be sent to him when he needs it, though the parents may be unwilling, or he will refuse to take it hereafter. It is obvious that the patronage in the hands of a gangmaster gives him a considerable hold over the parents.

V.—NATURE OF EMPLOYMENT.

Kinds of work.

64. The nature of the employment varies very much in different districts and seasons. A great part of the work is done with the hand alone, and some with a small tool belonging to the worker, such as a fork, a hoe, &c. Where the gang system is but little developed, and the employment only occasional, the kinds of work are few and simple, chiefly weeding fields with the hand, and picking up loose stones off the fields for making roads.

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More numerous as the system is developed.

65. But as the system is more developed it is applied to a greater variety of work. A great part of this consists in making or keeping the land in a fit state for the growth of crops, by cleaning it from weeds of all kinds, and may be included under the description of weeding, though locally different kinds of weeding go by different names, which need not be described here; and "knocking" or spreading, and putting in manure are sometimes added. Thinning or "singling" turnips and mangold wurzel is a work of the same nature as weeding. The work also includes the putting crops into the ground, as by setting potatoes and dropping seed for dibblers, treading corn on light soil, &c. Dropping is said to have much diminished from the increased use of drills. The work also includes the getting in of certain crops when ripe, *e.g.*, pulling turnips and mangolds or beet, pulling flax, and sometimes peas, instead of their being mown; picking up potatoes when dug or turned up; also gathering garden produce in market gardens of fruit and vegetables. The turnips or mangolds when pulled have also to be topped and tailed.

Harvest.

66. Gangs are occasionally spoken of as employed in haymaking and harvest; but it seems doubtful if this is the case, and at any rate it is not general. In harvest children are employed to prepare the bands for tying or binding corn, but the work requires them to be divided. A few workers are also taken from gangs to help in later processes, as at thrashing corn, or beating out flax. In fact, there seems to be hardly any kind of agricultural work not requiring too much muscular strength for which gang workers are not sometimes employed.

Thrashing, &c.

Use of children.

67. Much of the work, as hand weeding, is light in itself, but requires quickness of finger and constant stooping. It is said on these accounts to be much more suitable for children, who are nearer the ground and more supple, than for men, and to be done by them as well and quickly, if not more so, and of course at far less cost than it could be by men; so much so indeed, that it is said that by means of children a large amount of work, adding much to the productiveness of the land, is done, which otherwise could not or at any rate would not be done at all. There are, however, very different opinions on this point, several farmers who object to gangs altogether denying their necessity for these purposes, and stating that, in ways which they explain, on the same kind of soil and with the same crops they manage very well without employing them. In a village where gangs have lately been given up, the weeding has since been done by men.

Harder kinds of work.

68. Some of the work, as hoeing of different kinds, and pulling roots such as turnips and mangolds, and flax, is said to be very hard. Sometimes a tool is used for raising turnips, &c., which much lightens the labour, but is said to be sometimes objected to as injuring the root.

Exposure to weather.

69. All outdoor work, while it secures ample muscular exercise and fresh air, necessarily involves exposure to the weather. On fen and open districts where gangs are employed most extensively it is often impossible to get shelter of any kind, and as the workers are then at a long distance from home they cannot return in time to escape being wet through when rain comes on, and returning would involve the loss of a greater or less portion of their wages, according to the time of day. Hence, when far away, unless the day is hopeless, they remain out. If it is very wet they usually do not start, though they have been seen starting in rain.

Wet work.

70. Not only rain, but even in fine weather the dew makes the crops very wet, some much more so than others, and the higher the crop the more are the workers exposed to this wet, and females, owing to their dress, much the most. Hence they are often soaked through up to the knees or waist, and children even higher, and have to squeeze or wring out their petticoats, and even take them or other parts of their dress off and hang them up to dry. A young woman entirely crippled with rheumatism, which she got soon after going into a gang at 11 years old, says, "We have had to take off our shoes "and pour the water out, and then the man would say, 'Now then, go in again."

71. The degree in which they are exposed to wet in this way depends much on the judgment or considerateness of the gangmaster, but he is not quite free in the matter, and would probably be found fault with by the workers themselves as well as his master if he were too scrupulous. This exposure, however, is considered by many the chief objection to gang employment, especially in the case of females, so far as health is concerned, and it is suggested by a competent person that if the employment were placed under regulation, one of the several rules which it is suggested should be endorsed on a licence to be required from the gangmaster should be, "No girls to be permitted to enter high wet "corn in weeding." (No. 171.)

Miscellaneous farm work.

72. Some of the miscellaneous kinds of agricultural employment either clearly not part of gang work, or carried on in such a way as not to come within the meaning of the term as commonly understood, are referred to in Nos. 1, 78, 115, &c. Of the first kind are keeping or frightening birds from fields or stacks, tenting or watching cattle, sheep, pigs, or poultry in fields, going with horses, general farmwork, &c.

Doubtful kinds.

73. As to work more akin to gang work Lord Walsingham points out the importance of its being clearly understood what is to be included in any definition of gang employment, and after referring to some commonly included in it, says, "There are many other operations which are performed by "companies or under contract which it would be difficult to distinguish from the gang system," and instances reaping and mowing, and machine thrashing as contract work in which women and children are employed to assist, *e.g.* in tying sheaves, &c. (No. 78.)

Hop-picking.

74. Hop picking is an employment of just the same nature as several which have been described as kinds of gang work, and where I found this employment in Suffolk it is carried on upon a system which is very difficult to distinguish in substance from the gang system. The work is contracted for by one man, and carried on with the help of a number of overlookers called "lords," who have each a fixed number of workers under them. This system may be peculiar to that neighbourhood, and in the Farnham hop district, so far as I learned by casual inquiries, the workers are all engaged by the hop grower, without the intervention of any intermediate employer. As hop picking is so large a subject, and stands in some way by itself, and not mixed up with common farm work, and at any rate did not seem to be such an employment as was meant to come within the limits assigned to this inquiry, I did not think it proper to pursue the question any further.

B.

VI. Hours of Work.

Hours vary.

75. The hours of work vary in different districts, or with different masters. The regular hours are in most cases, and often considerably, shorter than the ordinary labourer's day. The time spent in going and coming to and from work will, however, require to be taken into account, but this is spoken of under the next heading (VII. q. v.) In Norfolk the regular full day for a gang is only nine hours, including dinner, or eight hours actual work, beginning at 8 a.m. and ending at 5 p.m., but when daylight grows shorter, they often leave work much earlier, *e.g.* between 3 and 4 p.m. In this case they do not have a dinner hour, but stop only a short time, ten minutes or so, to eat and begin work again, which is called working "one journey." In Suffolk the usual hours are in some parts the same, in others half an hour or an hour or two hours longer, as is also the case in a few places in Norfolk. In some places in the south of Norfolk and in Suffolk the custom is to take about two hours for dinner, and leave work at 6 p.m. instead of at 5. In Cambridgeshire and one or two places which I visited in the adjoining part of Northamptonshire, the usual day is longer, viz., about 11 hours, including meals, sometimes rather more.

76. In a few places in Suffolk and elsewhere, as in the outlying places mentioned in Nottinghamshire, the stated day is from 6 a.m. to 6 p.m.

Overtime rare.

77. Overtime is rare, and where it happens is not carried to any extent. Individual gangmasters or farmers are found who require half an hour or an hour longer than is usual in the neighbourhood, and it seems that occasionally a gangmaster who is doing piecework requires the gang to work half an hour or so longer. A large employer states his belief that this is the only way in which overtime exists. Extra time, however, is occasionally made on other accounts, for small portions of time up to a quarter of a day. This is done chiefly to make up for wages which have been lost by stoppages of work through bad weather on previous days, and sometimes because there is much to be done. At flax pulling, one gang works from 6 a.m. till 7 p.m.

Hours in other work.

78. In miscellaneous farm work, not in gangs, the hours are those of the ordinary labourers. Bird-keeping children in some cases are out longer, *e. g.* from 5 a.m. to 7 or 8 p.m., when the days are long enough, and, like boys in farmyards, are engaged on Sundays the same as other days. Harvest hours, as it is well known, are long, and children work as helpers in this, and it is stated occasionally as members of a gang; but this seems doubtful. Boys engage themselves to men. A boy, aged fifteen, had "taken" three harvests, engaging himself for five weeks to work from 5 a.m. till 7 p.m. at 6*s.* a week. A boy, aged nine, was hired by a man to make bands for sheaves, and afterwards led carts at carrying. For this he had to leave home at 4 a.m., and was not back till towards 9 p.m., or sometimes later. But this, of course, was only for a short time; "he could not have kept on long with it."

VII. Distance of Place of Work.

Long distances travelled.

79. The distance often travelled by gangs to their work is so marked a feature of their employment, and a matter so closely affecting the employed, that I have thought it well to speak of it under a separate head. Gangs are more especially employed where the land to be cultivated has not on or near it a sufficient population for the purpose; and, indeed, they are said to have first originated where this want was strongly felt. This want gangs furnish a means of supplying. By their means the labour of children and females is made available on a large scale, and can be applied with ease to any spot where it is needed, as one compact force, or like an engine, but one which as a rule conveys itself without any trouble or cost to the employer.

80. Hence the distances which the gangs have to go to work are often very considerable. Taking the most favourable cases, where the area to be cultivated lies compactly round the population which cultivates it as a centre, as is remarked to be the case at Whittlesea, it is obvious that the extent of land lying at a distance will be far greater than that of the land lying near, and hence that the long distances will have to be travelled far more frequently than the short. For example, taking an area of four miles square, with a population which cultivates it lying in the centre, and dividing the area equally into square miles, less than the whole extent of the four central square miles would lie within the distance of a mile from the centre, and all the remaining twelve would lie beyond it, and portions of them over two miles, *i.e.*, the extent lying beyond the distance of a mile would be more than three times greater than the extent lying within that distance.

81. But often the land does not lie thus compactly, and then to reach the distant points, longer distances must be gone. Gangs often do not confine themselves to land in their own parishes, and persons living in one parish or village in which there is not a gang often join gangs formed in other parishes, thus increasing the distance which they have to walk.

82. The distances to which the workers thus have to go are in some cases habitually great, and on occasions are stated to be so great that they might be thought to be exaggerated, were not testimony of the same kind very general. Some of the persons who speak on the point might have rather vague ideas of distance, and it was not always easy to test their accuracy, the local descriptions being necessarily hard for a stranger to make out. In some cases, however, the statements as to distance were made to me in the presence of and confirmed by other and indifferent persons acquainted with the position of the parishes and farms described; in some they seemed to be borne out by the ordnance map, on reference; in others they are written by persons acquainted with the district; in others, the time consumed in walking the distance gives a fair measure. Taking all the circumstances together, and the variety of persons in different interests and places by whom the distances are spoken of, I am satisfied that on the whole the statements made do not overstate the distances.

Instances.

83. It is common then for gangs to go distances of three or four miles to their work, not uncommon for some to go four or five, and some go up to six or seven, and at times, even to eight miles. The extreme distances are only occasional. Some gangs, however, habitually go to rather distant places, as three or four miles off. Other gangs habitually work on the nearer lands. This depends on the position of the farms on which the gangmaster is most frequently engaged. Some are very near.

On foot.
In waggons.

84. The gangs commonly go to their work on foot, but in some cases, where the distances are long, employers send waggons for them the whole or part of the way, and probably are no losers in the end

by being thus considerate, as it must secure a great saving in the strength and freshness of the workers. I have seen a gang of about 50 young boys and girls riding home thus part of the way to reach a toll-bar, and then walking. The practice, however, of sending for them is rare. In a place in Suffolk, in which county the long distances are not needed, a very moderate distance is thought to require conveyance for the gang, viz., a distance of under three miles, and the gangmaster, as his wife states, refuses to walk to one place three miles off, because of the fatigue. "It makes the children so "wonderful tired, and they can't stand it." The gangmasters who often ride to their work themselves on a donkey or in a cart, will give some of the workers a lift in their cart by turns.

Young children go far.

85. The young children go to distant places with the rest of the gang if they are wanted for the work. It seems impossible indeed, that children so young as the youngest referred to above could walk the longer distances named; but very young children do so.

Instances.

86. Some instances are taken from different neighbourhoods and counties, and others of a like kind might be added. A gangmaster employing young children, and having had some as young as 7 or 6 years, used to take his gang to one or two farms six miles off, and two or three times some of the children came a distance of seven or eight miles. To another place he had "had a boy 7 or 8 years and a girl of 9, "come six miles." A gangmaster in another place has "had one or two children of 8 years old walk "five miles out and five back." Elsewhere a woman, whose children began young, some before 7 years old, says "Some of mine have gone four, five, six, and seven miles off," and adds that the little ones, down to those at 4*d.* a day, have to go, "Not but what the little ones have all the same steps to set as the "great, and all the same yards and miles to go." A boy 5 years old used to be carried home from his work by the others. And elsewhere "You see the big ones come dragging the little ones home, "and sometimes taking them on their backs when there are overtired." A mother says of her boy that he had been six miles and further to work, and had come home so tired that he could scarcely stand; and that they had also had to send out late in the evening to look for him, as he did not come home, and had "found him dropped asleep in a cowshed."

Fatigue.

87. The workers may come home as slow as they please, but have often to hurry very much to their work, and it is found difficult to get very little children along, and therefore, some gangmasters will not take them. One, speaking of this says, "I have bought sweetmeats, and said, 'Those who get "'there first shall have these.'"

88. That considerable distances are common for children appears also from the fact that a petition for the regulation of gangs lately drawn up by a number of clergy in a gang district, for presentation to Parliament, suggests that,—"1st. No children should be employed under 10 years of age; "2nd. No children under 12 years of age should be allowed to travel on foot beyond the distance of "three miles to or from their work;" with other suggestions.

Distances on fens unavoidable.

89. A glance at the ordnance map will show the wide extents of almost uninhabited fen lands in Cambridgeshire and Norfolk, lying between Lincolnshire and the lines of railway from Ely to Peterborough and Lynn, which, with the exception of the southern part, near Ely, all fell within my district. It is stated on competent authority that, "There are 900,000 acres of low land lying below "the level of spring tides, drained by artificial drainage, and lying north of Cambridge *i.e.* from Cambridge to Lincoln, and bounded by the sea." A great part of the fen land has been uninhabitable from its lowness and wetness, parts having been under water in winter, but it is possible that the improved drainage may make it habitable, and the present enormous waste of power from the distance from which the labour has to be brought would, it seems, naturally lead to planting populations where it is practicable. Still, at present from the very improvement of the land there is more land to be cultivated without more labour to cultivate it. The fen lands, too, are said to require more labour in weeding than other land, owing to the greater growth of weeds.

On higher lands.

90. The high parts of West Norfolk, too, contain wide extents of thinly-populated land, the population of many villages, where they exist, being altogether inadequate to supply labour for the land in the parish, and the quantity of land taken into cultivation is said to have greatly increased. Hence an open or large parish, in the midst of close or small ones, has to meet their wants as well as its own.

Distances less than formerly.

91. It seems, however, that as the number of gangs has increased, the distances to which individual gangs go naturally are not in general so great as when they are fewer and farther apart. It does not appear that, whatever may have been the case formerly, they now go to such distances as to have to sleep away from home; or if they ever do, cases did not come under my notice. One witness states that this was the case, but not within twenty years. But a former gangmaster, said that the statement to this effect in the Poor Law Report of 1843 was not true. A gangmaster's wife, however, in another place told me that her husband, who had had a gang eight or nine years, had been asked by a farmer to go to a place so distant that the gang would have had to sleep out; but "he had plenty of work here, "and would not go." A gentleman also states that a few years ago, in crossing the fens, he found a number of his parishioners, including women, girls, and boys, whom he knew to be regular workers in a gang, though he could not positively say whether at the time, which was harvest, they were working as a gang, and asking them how they managed so far from home, was told by them that they did not return home from Monday morning till Saturday night; the farmer letting them have a barn to sleep in. He adds, "My belief is that this was nothing out of the usual course in the case of distant work."

Private gangs not go so far.

92. The very long distances are travelled by the public gangs. The private gangs work only on the land of their employer, and this commonly lies within a moderate distance.

Occasional extra pay for distance.

93. When gangs go long distances, the workers in some cases receive extra pay *e. g.*, a penny or two, and in some do not.

VIII.—MEAL HOURS.

Usually full.

94. When the day is nine hours or more, one out of these hours is allowed for dinner, in a few places an hour and a half or two hours, and as a rule the proper time is taken. When the afternoons are short, a practice prevails of not having a dinner hour, but only a short break of ten minutes or a quarter of an hour, or long enough to "just take a snack," and then leaving work early, as at 4, or even 3 o'clock. When the day begins early, as at 7, or before, breakfast-time also is commonly, but not in all places, allowed,—about half an hour; and where the work begins later, if it is very far off, a rest is also

Exceptions.

sometimes allowed for eating before beginning work. A short rest in the forenoon or afternoon, or both, is occasionally mentioned. Starting early, some may not have time or feel ready to eat first. A gangmaster, who starts about 7, says, "Some of the children ain't hardly up, so they take a little "bit in their hand to eat."

95. The children working at a distance carry their meals, such as they are, with them, and eat them on the ground; but these are necessarily very scanty,—often only a piece of bread, and, if they can get it, a bit of cheese, butter, or an onion, or some other help. Sitting on damp ground for meals and rest cannot be helped.

IX.—Treatment.

Accounts vary.

96. A great number of persons, though disapproving of gangs on other grounds, state that the treatment is good, or at least that no ground for complaint is known. Certainly charges of ill-treatment appear hardly ever to come before magistrates. Where children's earnings, however, are involved, the mere absence of complaint does not prove much. Some persons state that the treatment depends on the character of the gangmaster; and some that it is often harsh, and that children are beaten by their masters.

Gangmaster's stick.

97. It is a common practice for the gangmaster to carry a stick or whip, but more, as they say, for show and to frighten the children with, or to "give them the promise of it," than for use; and they say that they could not keep a lot of children in order without it. Many do, however, use it more or less, or, as is sometimes said, "freely," both for unruly behaviour and for neglect of work; and, it is said, sometimes where the children are really not in fault, but simply unable to keep up to their work. It is often said, that when it is used it is only used properly, and not really to hurt; but it seems sometimes to go beyond this. A mother, whose boy had never complained, says, that on hearing from others of the man "flogging" him, "I have looked and found bruises on him from it. It would be, as "I was told, for standing up, or looking about, or that. I did not like to notice it, for fear of making "him disobedient." "Flogging" is an expression in common use.

Gang driving.

98. The gangmaster or mistress is often spoken of as the "driver," or as "driving" the gang; but probably this is only from the fact of his walking behind them so that he can see how they do their work, and carrying a stick; but it is an unfortunate name.

Backbreakers.

99. A practice is alleged which is referred to by the term "backbreakers." This is explained to consist in employing one of the strongest and most active workers to lead the rest, and act, as it were, as the stroke-oar in a boat, by working fast and setting a rate to which the others are kept up by the gang master. Some inducement, such as extra pay or conveyance to work is supposed to be given to this person. (Nos. 9, 10.) I obtained, however, very little information, and, indeed, made very little inquiry as to the practice; and it seems to be unknown to a large employer in a place in the neighbourhood of which the practice is mentioned. (No. 12.) A gentleman, however, informed me that the practice existed in his parish, and offered to state the fact in a written communication; but this has not been received. A woman, also, to whom I was referred as having acted as backbreaker denied her knowledge of the practice.

100. Still something of the sort seems to exist, it may be quite exceptionally. The name would hardly have been invented from nothing, and its mere existence implies at least a belief in some such practice. It is referred to in No. 15. "One has to lead, and has 1*d.* or 2*d.* extra to drag the others "along." It is stated in No. 169, "one of the best workers was put outside, a boy at one end and a "girl at the other to keep the others straight;" and this seems very natural. It is also said that naturally sometimes the little ones find a difficulty in keeping up with the bigger. The consequence of this to them would depend no doubt on the considerateness of the gangmaster, and one says that he allows for them and lets them rest a bit; or they get helped by others.

Injuries rare.

101. Real ill usage, however, is, I believe, rare, though not unknown. A ganger was imprisoned for kicking a girl and injuring her in such a way, as I understood from a medical man in the place, as to make medical attendance needful, though he was not the attendant; but it was a good time back, and I did not obtain the particulars, and my informant did not attend her himself. A medical man in another place mentions "a case some years ago where an injury to the spine was ascribed to a kick in the back "given by the gangmaster to a girl of scrofulous habits, who ultimately died; but that is quite an "exception" (*i. e.* as to treatment). A woman in the same place speaks of a girl, no doubt the same, as "laid up from it for years with sores in her back," but says that it was the only case of injury which she had known. A woman in another village says that her boy "lay suffering for nearly six years "before he had his leg and thigh taken off," on account of a white swelling on his knee, which came when he was 10 or 11 years old, as the doctor said, "from ill usage, a fall or kick;" and others told her about the man kicking him, though the boy said it was from a thorn, but the doctor said that that was not the case.

Rough language and treatment.

102. But though injuries are rare, instances of rough treatment are less so, and some gangmasters have borne a bad character for using violent language and swearing at the children. For instance, such acts as knocking down, kicking, hitting with hoes, &c., "dyking," *i. e.* pushing into the water, and "gibbetting," or lifting a child off the ground by coming behind and putting the hands under the chin, till "one boy was black in the face," are mentioned. Of the man who practised this it is said, "one ought not to be glad to hear of any one's death, but a good many children were glad when he "died."

Probable cause.

103. Undue roughness is, I believe, likely to be found most where the gangmaster is old or incapable, and wanting in the consciousness of power to govern by proper means, and not where he is active and strong, and his temper is more equal to the worry of his place. For no doubt, as gangmasters say, managing a number of young children, and keeping them properly to their work, is most troublesome and wearying, and from the nature of the case gang children as a rule are likely to be those who have had the least advantages of bringing up, either at home or at school. The position requires both activity and intelligence.

Use of stick unnecessary.

104. Some men manage very well without using a stick, and suitable men could no doubt always do so. On failure of other means, the discharge of two or three idle or unruly children would be far

more effective, and do all that is wanted. Of this one gangmaster states his experience thus: "I never "had to hide the children; I had seen enough of that. * * * You can do best with kind words. If any "would not work I used to send them home."

Its forbiddal suggested.

105. One of a series of suggestions made by a gentleman who has seen much of the working of the gang system, Mr. G. M. Smith, Clerk to the Justices of Whittlesea and Thorney, is, "Petty sessions "to have power alone to punish for misconduct by the gang children." (Cf. Nos. 171 and 251.)

Enforcing work by corporal punishment.

106. As to the infliction of corporal punishment on children by a gangmaster, it may perhaps be thought proper enough as a means of enforcing discipline, though repulsive as a means of enforcing work, as it appears to be thought by those who speak of the gang system as "slavery" or "nigger-"driving." A gang-master, indeed, in speaking of the necessity which he finds of hitting the children with a stick, says, "I don't see the difference between this and what a schoolmaster does." It may be remarked, however, that, if corporal punishment is allowed at all, a distinction between unruly behaviour and idleness in work is too fine to be likely to be drawn in practice by an uneducated man, to whom the work is the one main object. A further remark also seems to be proper, viz. that a child is sent to school for his own good, but is sent to work, in a great measure, for the profit of others, and to his own loss as regards the benefits of education.

X.—WAGES.

Wages vary.

107. The wages in a gang vary in different neighbourhoods, and according to different arrangements. Like those of labouring men and women not in gangs, they are higher in the western or fen district than in the higher land of Norfolk and Suffolk. In the two latter, the wages of common labourers are from 9*s.* to 11*s.*, according to the year and season, very commonly about 10*s.*, while in the former district they are about 12*s.* More is earned by piecework and in harvest, so that the nominal 10*s.* of Norfolk is thought by Lord Leicester to be really 12*s.*, with a considerable increase in hay and corn harvest, and an employer in Suffolk finds that each labourer at a nominal 10*s.* a week costs, one way or other, about 35*l.* a year. Gardens are also often a considerable help.

Women's, girls', and boys' wages.

108. A woman's pay at common farm work is reckoned to be about half that of a man. In gangs her pay is commonly somewhat less, *e. g.* 8*d.* a day instead of 10*d.* An employer in Suffolk states that women earn 7*d.* or 8*d.* a day in field work, and it seems that in some places in gangs they earn less. A gangmaster says that girls do not get more than 6*d.* till they are married, though 17 or 18 years old or more, and a mother says that "6*d.* is the top price till you get to be a woman." Boys commonly leave gangs by the time that they get to woman's wages, if not before. The age at which girls come to be regarded and paid as women varies according to their strength and quickness.

Younger children's wages.

109. Children of either sex begin at low wages, according to their age and strength, and their pay is gradually heightened or raised by the increase of 1*d.*, or sometimes only ½*d.* till it reaches the above point. Their average wages are from 4*d.* to 6*d.* a day, which is the usual rate in Norfolk; sometimes, as in the fen district, where however the day is somewhat longer, 1*d.* or 2*d.* higher, and sometimes, as in Suffolk, 1*d.* or 2*d.* lower. In Suffolk the youngest children begin at 3*d.* a day, and some at 2*d.* Of two children in a gang, for their fourth year, the mother says, "Agnes was 7 when she began, and got "2*d.* a day; Frank was 6, and got 1½*d.*; he has been heightened ½*d.* each year since." Another woman began, as she had heard, at 1½*d.* a day.

Irregular.

110. The work in many cases is carried on only in certain seasons, and where it is more permanent, individual children, especially the younger, are liable to longer or shorter breaks, from there not being employment for the gang suitable for them, or enough of it. When there is such employment, the work is often interrupted for days, or parts of days, by the weather. As a rule, the hands of course are only paid for the time which they are actually at work, *e. g.*, for one or more quarters of a day, as the case may be.

Sometimes no pay.

111. Unless they make as much as a quarter of a day, they get nothing, though it appears that sometimes this is made up by a sort of equitable arrangement of counting this time in with like fractions, or extra work on other days. The gang does not start if it is steady wet, but when once out the master does not like to send them back. "They have gone out, and had it come on wet as soon as "they got to the place, and been dangling about all day on the chance of its being fine, yet got "nothing." According to a gangmaster's wife, for a quarter of a day, "those that get 5*d.* a day, get "1¼*d.*, and three-penny ones get a halfpenny. That ain't much to get wet for, is it?"

Children pay for help.

112. Sometimes, for convenience, younger children are paid at a higher rate than they can really earn, the deficiency in their work being made up by the help of other workers near them. Where this is given, as it often is, by a mother or elder brother or sister, the practical result of the payment is the same. But it may be by a stranger, who gets a penny or two from the child for helping it. "Some are "obliged to have two helpers. I have had 2*d.* a day for helping a little one. You set the price for "helping them, and if they don't like it, you don't help them."

Actual earnings.

113. Hence the nominal wages of children while at work do not enable one to form any accurate estimate of the yearly amount actually earned by a child at gang work, but it is plain that, taking a whole year, in a great number of cases the benefit resulting to a family from the labour of its children is far less than might be thought from counting the wages and the number of children, without reference to the other circumstances, a point which appears often to be lost sight of. On this point a gentleman of very ample experience remarks that in the case of children from 9 to 13 years of age, "a compul-"sory educational half day would not in the end deprive them of *much* of their wages taking the year "through."

Whether remunerative for girls and young children.

114. Beyond this, however, many, including mothers, are of opinion that in the case particularly of girls and young children, owing to the wear and tear of shoes and clothes from the long walks, and from wet and rough work, the profit even while they are at work is more apparent than real; and some that, even apart from moral considerations, the work does not really pay in the long run.

Large sums paid.

115. The earnings, however, of gangs are very considerable in the aggregate. Mr. J. Hudson, a large employer at Castleacre, where many elder females work in gangs, estimates that more than 1000*l.* a year are earned by gangs in that parish (No. 87), and states that the daily earnings of three companies alone, viz., those employed by himself and son and another large occupier, amount to

upwards of 740*l.* a year. A gang-master on the borders of Norfolk and Cambridge has paid amongst his gang from 14*l.* to 17*l.* in a week, and one in Suffolk, 9*l.* Another gangmaster has paid in a full week 11*s.* 6*d.*, or, on the average, with lost time, 9*s.* or 10*s.*, to a girl of 17 and three younger boys, all from one family; another has paid 14*s.* in a week to five children from one family. A case is stated even where two children in a gang, the eldest only 7 years old, add nearly 5*s.* a week to their father's weekly 11*s.*

Time and place of payment.

116. The wages are paid weekly on Saturday night, but in one place mentioned only once a fortnight. It is suggested as a point of importance that a gangmaster should be required to pay the wages by a fixed hour, not later than 8 p.m., and at some private place; never at an ale house, from which abuses are said to have arisen, as well as from the lateness of the hour.

Other wages.

117. At the other miscellaneous employments of children on farms, the wages do not differ much from their wages at the same age and place, in gangs. At hop picking, at a place in Suffolk, the youngest children get 2*d.* a day; but some too young to be regularly hired help to pick, for which a trifle may be given to them, and they have also a hope of having their names booked for employment another year.

XI.—INFLUENCE OF EMPLOYMENT ON PHYSICAL CONDITION.

Opinions vary.

118. A great number of persons, including those who have no pecuniary interest in the matter, such as the clergy, consider the employment to be in no way injurious, or to be beneficial, and some think it remarkably so. Others consider the work not to be injurious in itself, but to become so only when the hours of work or the distances walked to it are too great for the age and strength of the workers, as well as from the unavoidable exposure to the weather, and to working in crops wet from rain or dew. Complaints are made by several, chiefly parents and workers, that, in addition to the injury from wet, some kinds of work are in themselves too laborious, and liable to cause injury to the young or weakly.

Medical opinions scarce.

119. There is nothing in the employment to attract the attention of medical men generally to it, as distinct from other out-door work around them, and but few have expressed any opinions on it. Such as I obtained will be found in Nos. 32, 96, 120, and 168, and the answer "Beneficial," not given in the parts printed of the Return, No. 202. Of these it will be seen that only two speak of any bad physical effects. See also the references in No. 46 to the Poor Law Report of 1843, and the medical opinions generally in that Report.

Privy Council Report on infant mortality.

120. The Sixth Report of the medical officer of the Privy Council attributes to the employment of women in field work in gangs and otherwise a very bad effect on the rate of infant mortality in certain districts. It states as a fact then first made known to their Lordships, the following:—

> "That in some entirely rural marsh districts the habitual mortality of young children is almost as great as in the most infanticidal of our manufacturing towns; that Wisbeach for instance is within a fraction as bad as Manchester; and that generally in the registration districts of (eighteen others, which include several in which the gang system prevails.—J. E. W.) the death-rate of infants under one year of age is from $2\frac{1}{4}$ to nearly 3 times as high as in the sixteen districts of England, which have the lowest infantile mortality." (Sixth Report, p. 33.)
>
> "The result of this new inquiry, however, has been to show that the monstrous infantine rate of the examined agricultural districts depends only on the fact that there has been introduced into these districts the influence which has already been recognised as enormously fatal to the infants of manufacturing populations—the influence of the *employment of adult women.*" (Sixth Report, p. 35.)

Increased female labour and its effects.

121. The effect of the gang system is to increase the employment of females, adult as well as young. Their labour is most easily available on light land, and is accordingly largely employed on the reclaimed "black land" of the fens and other light land; and of these, large quantities have of late been brought under cultivation, and with the help of their labour rendered very productive, though "the rural population has diminished." The consequences are thus described:—

> "The opinions of about 70 medical practitioners, with those of other gentlemen acquainted with the condition of the poor were obtained. With wonderful accord the cause of the mortality was traced by nearly all these well-qualified witnesses to the bringing of the land under tillage; that is to the cause which has banished malaria, and has substituted a fertile though unsightly garden for the winter marshes and summer pastures of 50 and 100 years ago. It was very generally thought that the infants no longer received any injury from soil, climate, or malarious influences, but that a more fatal enemy had been introduced by the employment of the mothers in the field." (Sixth Report, pp. 35. 455–456.)

Details.

Opium.

122. The Report and Appendix (pp. 35-37, 81–82, 455–461) refer more in detail to gang and other field work of females in producing or increasing immorality, miscarriage, neglect of nursing infants by mothers, and drugging them with opium by the persons with whom they are left, as well as to the extraordinary quantities of opium used by the population in general in the fen district. This use of opium came under my notice in the course of my inquiry.

Causes of infant mortality.

123. The cause of death of more than half the infants recorded is, as reported, by a general agreement of a large number of medical practitioners attributed to "ablactation and narcotism."

Remedies suggested.

124. As remedies for this evil "two measures of public police" are suggested, viz., That an infant nursery, under a responsible nurse and proper supervision should be established in every village of moderate size throughout the ganging district, and that a licence should be imposed on all sellers of opium.

125. No injury, however, to life or health is there reported as resulting from gang work, except in the indirect ways above referred to, and, in the case of children, "too young to join the gangs," and "it is to their fate that attention was specially directed," that being the special object of the inquiry. To the elder workers the employment is implied to be beneficial.

Effects of gangwork on health.

126. From the whole evidence obtained in the present inquiry it seems plain that a certain amount of physical injury does result from the influences to which gang workers are exposed, but only of the kinds to which all field workers must always be more or less liable under any system. Thus, exposure

to cold and wet is said to lay the foundation of rheumatism and other chronic complaints; but these are commonly remote effects, and it is only the minor and immediate effects, such as colds and chills, which can be well traced to any particular date or kind of work.

Often good.

127. The fresh air, and the out-door exercise, and other circumstances of field work are no doubt, as stated, beneficial to the strong and healthy. Mere exposure to weather is not, I believe, generally thought in itself injurious to the healthy, if warmth is kept up by exercise, and there is sufficiency of clothing, and means of changing it. At any rate it is an unavoidable incident of field work, and is probably much less injurious in any case than the confinement and want of air and light so often found in the in-door work of manufactures. It seems natural enough to conclude with a medical gentleman and others, that "the strong are seasoned and hardened," though the young and delicate may be injured. The appearance of such as I saw at work, or returning from it, was in general satisfactory. Some of the young women look extremely healthy and muscular.

Unfavourable tendency of the system.

Children and young females.

128. The point which seems chiefly to require notice is the tendency of gang employment to bring those who are least suited to bear the unfavourable influences of out-door work to a greater degree under their operation. Children and young females are plainly more susceptible than others of injury from cold and wet. Many of the girls are at an age which a medical witness describes as an especially delicate time, and when they have not the knowledge or liberty to avoid exposure at times when it is specially injurious to them.

Wet clothes and feet.

129. The dress of females collects wet much more than that of boys or men, and even if they are at work, does not dry nearly so quickly. But it is not found suitable to carry on the work of a large number while the crops are wet, and the workers are often waiting about for long intervals with wet feet, and their clothes soaked through up to their knees or waist, or higher, doing nothing but waiting till the weather or the crop is drier. Children, from being shorter, are wetted by the crops higher up their bodies than elder workers, though not worse off as to rain. The gang-workers, as a rule, are the poorest of the labouring class, and many of them are badly fed, shod, and clothed, and have very small means of making a change of clothes when they return home.

Long exposure to weather.

130. The long distances at which they work tend to keep them longer exposed. If the distances were less, they would be less likely to be taken or kept out when the weather is unsuitable: and if the hours of work for children were less, it would at any rate diminish the evil for them. A gentleman, mentioning a case of diphtheria, stated by the doctor to be then past cure, in a child of 6 years old who had been stone picking, remarks that children "ought not to be exposed to the risk of rain and "the cold for so many hours successively;" and that from 1 p.m. to 5 30 p.m., or from 8 a.m. till noon appears to him a sufficient space of time for their labour in the open fields in any single day. (No. 143.)

Case of a child.

131. A mother in like manner says of her child, who began to work in a gang when just turned 6 years old; "She was a corpse from going in the turnips. She came home from work one day when "about 10½ years old with dizziness and her bones aching, and died and was buried and all in a "fortnight. The doctor said it was a violent cold stuck in her bones." The child had asked to begin work so young, saying, "Mother, I want some boots to go to school."

A medical opinion.

132. One of the medical gentlemen referred to, states, "From my experience there is no doubt that "they suffer considerable injury from the exposure to cold and fatigue in the course of their "employment as carried on here (Whittlesea), especially from this exposure at too early an age;" and facts and opinions bearing out this statement might easily be collected from the evidence printed and unprinted.

Strains, &c.

133. There are occasional local injuries, *e.g.*, strains from carrying weights of stones or roots. A girl says, that pulling turnips is "a detriment to the spine;" and another, that she hurt her back from carrying them, and could not move for two or three days, but had to be turned over; but these and some other small injures are not such or so general as to require much notice.

Minor discomforts.

134. There are also several minor bodily discomforts besides those from cold and wet, such as over fatigue, and blistering the feet from the long walks, and blistering the hands or having them "raw" from pulling roots. In frosty weather the tops are said to be "all full of ice."

XII.—MORAL CONDITION.

Moral condition a chief feature.

135. The moral condition is, according to very general testimony, the point of chief importance to be considered in the question of gang employment, though there are persons who think that gangwork is not more injurious to morals than common field work or other employments, such as domestic service. In some ways this may be true. It may well be that adult females or elder girls are exposed to more danger when working singly or in small numbers in fields or barns, than where a number are together and under some sort of control, at least while work is going on. Indeed, barn employment has been mentioned to me as having bad moral results. But this is only a partial view of the question, and one of the main objections advanced against the gang system is, that it tends to take the young away from good influences and expose them to bad, and thus to make them less able and less willing to resist evil when and in whatever position it may come in their way.

State of education.

136. The bearing of the system upon the education of the children of the agricultural poor is so obvious as hardly to need to be pointed out. As to the actual educational attainments of the workers I made scarcely any inquiry, thinking this unnecessary in a case where there are so many persons who from long experience and special attention to the subject of education are in a position to state a competent opinion as to its condition in their parishes. These opinions will be best appreciated by reading them as they are given in detail. I will only state their general effect so far as to say that there is a very general concurrence that the state of education is unsatisfactory, and that the gang system, where it prevails to any important extent, is a great obstacle to education. That it must be such an obstacle is plain from what has been stated as to the ages at which and the varying and uncertain times for which children are employed.

Agricultural Gangs.

Mr. J. E. White.

E.

How affected by increasing employment.

137. I will refer, however, to a few statements as to school attendance; and first, as to the age of children receiving education generally, without limiting the question solely to the influence of gang employment. The Rev. F. Meyrick, H. M. Inspector of Schools in Norfolk and part of Suffolk, in his his Report of the year 1863, states,—

> "The average age of children in the first class in country schools is now 11, whereas a few years ago it was 12. This is partly owing to the natural pressure on the poor from the requirements of labour, partly to the existence of what is called he gang system." And in his Report of the year 1865, "where this system prevails, it is impossible that the schools can be efficient or the children adequately taught." (No. 236

According to the Report in the year 1865, of the schools under diocesan inspection in the diocese of Norwich, which includes Norfolk and half of Suffolk, the average age of children in the first class is 10.31. (No. 230.)

138. The Rev. W. T. Beckett, a Diocesan Inspector of Schools in this diocese, states that, "The "employment of boy labour during the last few years has been progressively increasing, as shown by "the fact that in this deanery fewer boys are now taught in schools than there used to be, and that "they quit school at an earlier age." (No. 1.) He is here speaking of the general employment of boys in field work, and implies that the number of girls has not fallen, at least not in proportion.

139. In a small parish in which it is said that many children are employed in agricultural work besides those in a gang, and that the demand for them and women is increasing, the incumbent states,—

> "The consequence of the demand for children's labour is, that it is scarcely possible to keep children at school beyond 8 years old, and with a population of 400, and a school in winter of more than 40 scholars, I had yesterday (May 1,) only 18, and those little more than infants, and I shall be as deficient for at least two months more. There are, however, more children absent with their parents than in the gang." (No. 113.)

140. Speaking of his own parish in which children, some very young, are employed in gangs, the Rev. T. Hutton remarks that, "education has been within the reach of the poor for the last 50 years," and that there is now and has been for years every educational advantage, "and all for one "penny a week;" and yet "the number of men who signed the marriage register with marks the last "ten years was only four per cent. less than it was a hundred years ago." He further refers to the well-known fact as to the superior state of education in America, and states that to a question lately put by him to an American gentleman of long experience as to the percentage of persons in the New England States unable to read, the answer was, "No percentage at all." (No. 167.)

141. In many cases, however, the diminution is traced in a large measure to gang work. In the busy seasons of this and mainly on account of it the schools fall off largely. Thus in one gang parish a school supported by a charity and quite free, falls then from its full number of about 120, to "about "a half." (No. 48.) A statement made two years ago by the schoolmaster as to the attendance in the previous year at another school in which the average attendance for that year was 60, is as follows,—

> "I find that during last year no less than 14 girls and 17 boys, in all 31 children, between the ages of 5 and 11 years, were taken from the school for gang work. In fact, the attendance is so affected by it, that the average for each child throughout the school is only 12 weeks per year." (No. 213 *b.*)

Perhaps few schools may be affected to this extent; but these cases are but instances of a fact very generally complained of.

Effect not limited to time of employment.

142. The interference with education is not limited to the actual requirements of work. If children attended school whenever they are not wanted in the gang, a considerable amount of education might be received; but when they are taken to work, though for short times, the habit of school-going is broken, and loses its force, the children are thrown back and discouraged in their learning, and return, it is said, when they return at all, with less orderly habits, owing to the defective discipline at their work. Some parents do send their children to school in the intervals of work, but many do not, and do not think it worth while, when they are looking for their children to be employed again shortly, and one remarks that she "always looks to keeping her children from school" in the busy season to be ready for gang work. If they do wish to send their children at odd times, the rules of a school do not always admit of such irregular attendance. Besides, parents think that they might not get their money's worth, as a child attending for part of a week might be required to pay for the whole. Occasionally a child gets a little teaching at home. A neighbour drops in for this, I was told at one house.

143. In the above remarks the question of employment in farm work generally is necessarily more or less mixed up with that as to employment in gangs. Often the persons whose opinions are asked do not find it possible to draw a clear distinction between the two cases.

Effect of gang-work on morals.

144. As to the more strictly moral bearings of the gang system in its fully developed form, the agreement of opinion amongst persons of all classes is so general as must command attention. The clergy naturally speak strongly as to the bad effects, more strongly often than appears in the evidence. But their opinion is borne out by employers and by the labouring classes themselves. In some cases attempts have been made to lessen the evils, and in others employers on moral grounds object to employing gangs at all. The poor themselves have a very strong objection to gangs on the same ground, and while many send their children, especially girls, to them unwillingly, as the only means of employment, some are found who will not do so, however much they may need the children's earnings.

Language and behaviour.

145. The objection of the poor is chiefly to the bad language and behaviour said to be common in gangs, and also to the characters of some of the workers, and to the knowledge of evil thus learned, and is strongest in the case of girls. On such grounds one mother, who only sent one boy for a short time, says, "I would sooner suffer hunger;" another, who never would send any of her children, "I would sooner send them to the workhouse, almost, if the truth was known." Many others express like objections. Some gangmasters say that they do not allow any bad language, and no doubt do their best to check it; but, owing to the number of the workers and their position in a line, this is very difficult, and with men of the kind that many are, where there is the will the power must often be wanting. It is said of one that "he would try to stop it if he could, but he might as well try to stop "the wind from blowing."

Agricultural Gangs.

Mr. J. E. White.

B.

146. The behaviour and language of gangs are described as extremely coarse, rough, and even to strangers so much so, that a respectable person meeting a set of these girls and women "cannot "venture to speak to, scarcely to look at them, without the risk of being shocked by them. This is only an instance of what I was often told, and certainly, where the employment is prevalent, some of the big girls and young women seen returning from work were strangely bold in look and manner, and such as I should certainly have avoided speaking to. The roughness of the girls appears to grow with their age.

Mixing sexes.

147. A leading objection generally made against gangs is the mixture of the sexes in the same gang, which is said to have a very bad moral effect, not so much, however, while they are actually at work, when the males are generally at one end of the line and the females at the other, and they are occupied and under control, as in the meal times and on the way home. Seeing how young most of the boys are, it seemed to me that the evils said to arise from this must have been somewhat over estimated. From some facts which are mentioned, however, it appears that this is not always a security against the evil. A separation of the sexes is also commonly recommended as an essential point in any legislative regulation of gangs, and practically in many cases persons have been led to insist on such a separation in gangs employed on their land, and a great improvement is said to have arisen from it. It does not appear that any practical inconvenience is found or anticipated from such a separation, except that where the population is very small, it might not be easy to find a sufficient number of one sex to make a large enough gang for a man to keep.

Separation of sexes.

148. Notwithstanding, however, the strong views entertained on this point, it does not seem likely that the plan will be generally adopted, and it is far from being the common rule at present. A strong argument against the likelihood of its becoming so is furnished by an instance mentioned as happening at a great seat of gang employment, viz. Whittlesea. After an inquiry into the system nearly twenty years ago, under the direction of a Farmers' Club, "it was resolved that mixed gangs should "be abolished, and that the girls should be attended by a woman. The gangers, however, were so "opposed to the alteration, that the farmers were eventually talked over, and the old system revived." (No. 171.)

Returning home.

149. It is suggested that, in addition to abolishing mixed gangs, the master or mistress should be required to bring the gang home under their charge. "If the boys and girls employed in the "same field or the same locality are permitted to return home promiscuously, without any moral "supervision, the separate system would lose half its advantages." (No. 167.) At present, except in the rare cases where gangs are carried all the way in waggons, the workers commonly return home as they please, either with their master, or loitering any distance behind him, and his control practically ceases with the work. The gangmaster, however, could of course only bring the gang to his own village; but this in most cases would secure a main part of the object, though very hard to carry out.

Indecency.

150. Mixed gangs are also objected to on the ground of indecency. In the case of females, their dress as it is often worn or as arranged to avoid the wet, and the stooping nature of the work are said to involve a certain amount of exposure, which excites the notice of the other sex, and leads to indecent remarks. The long absence and distance from home also, in an open country, with no place of retirement within reach, make the privacy observed in common life impossible. In the fens there are wide plains of fields divided not by hedges but by dykes of water, so that escape from observation is hopeless. It is plain that occasions must often arise when what is commonly thought decency must be sacrificed, and instances have come under my notice while present with a mixed gang. "Then the boys laugh at "the girls." Anyhow, as remarked, the circumstances referred to "cannot but result in a loss of natural "female delicacy, which is, at least, some safeguard of morality."

Bathing.

151. Cases are mentioned also of boys bathing before the girls of the gang; and it is asserted that girls have been known to bathe with boys. This would naturally be in the meal-time.

Indifferent characters in gangs.

152. Another objection is, that the character of the workers is less considered by gangmasters than by employers of a higher class, and hence that persons who, from their character or other circumstances, cannot get better or regular employment in any other way, are almost obliged to go into a gang. Young women with illegitimate children, or of vicious habits, or idle youths and others, "such as the "regular farmers won't have," are mentioned as instances. As the steadier and more respectable parents, as a rule, avoid as much as possible sending their children to gangs, and have a better chance of keeping them at school while young, and getting better employment for them afterwards, many of the children also in gangs are likely to be of the less satisfactory kind. A large number of the workers are, of course, thoroughly deserving and respectable. This, however, is said to make it the greater pity that they should be exposed to the bad influence of the others, and too often brought down by it.

Previous training.

153. So far, however, as any of the workers in gangs are of the class described, it is a fact of importance, and it is only fair to notice it, as it shows that some of the evils supposed to be produced by the system may really be the results of other and independent causes.

Home influences.

154. From what is stated, there seem good grounds for believing also that much of the bad language and immoral behaviour said to result from gangwork may really be the result of previous bad influences in the homes of the poor, especially of the want of sufficient accommodation for the members of a family in their cottage. (Nos. 1, 75, 117, 118.)

Cottage accommodation.

155. The cottages which exist often do not admit of a sufficient separation of the inmates. A policeman, speaking of the bad effects of the gang system in his village, in which it prevails largely, and in particular of the gross immorality of the girls at an early age, and their "boldness and shamelessness I "never saw equalled during some years of police life and detective duty in the worst parts of London;" and of the vice and ignorance of the boys, writes, "They live like pigs; great boys and girls, mothers "and fathers, all sleeping in one room in many instances."

156. There is often only one bedroom, the living room, however, being sometimes used as a sleeping-room; and there are cottages consisting of only a single room for every purpose. In one such a family of eight has been known. One cottage which I saw was a mere hovel, about 12 ft. by 9 ft. 6 in., and the door, which reached nearly to the top of the wall, not 5 ft. 6 in. high, with thatched roof bare inside, and with no out-door accommodation. This was a cottage run up on the waste by the road side.

I have been informed that cottages are thus run up very hurriedly so that they may be inhabited before they are discovered; and that the kettle has even boiled on the hearth in the morning where grass grew the evening before.

B.

Character of gangmasters.

157. Another point very commonly noticed, is the unsatisfactory character of many of the gangmasters. There are, of course, many exemplary men, who do their duty to the best of their power, but as a rule the position is not such as to attract the best men, and they are often spoken of as below the average of the labouring class, from which they commonly come. Two, however, in whose houses I was, are publicans. Some active men take to the business with a view of bettering their position, and others, from some bodily infirmity, from accident, weak health, or age. In one place some are spoken of as former pauper patients. But others, it is said, take to it from less satisfactory reasons, *e.g.*, because they dislike work, or are in some way such as cannot get good employment for themselves, or are men who have only irregular occupation. In one place a "mole-catcher" is given as an instance, and in one or two other places a gangmaster was described to me as by profession a rat-catcher or a vermin killer.

Some quite unfit.

158. It cannot be doubted that many are entirely, some it may be said even shamefully, unfit to have the charge of children, *e.g.*, men noted for their use of bad language, habits of drinking, some even convicted of offences more directly unfitting them for the charge of females and children, particularly in a position of such influence, and free from any control.

Instances.

159. Not long ago a woman, acting as manager of a gang for her husband, was convicted of stealing potatoes, which the gang of 12 children had been engaged in picking. "She made the children the "instruments of the felony, and they concealed the potatoes in their dinner baskets," which were found in her donkey cart so filled, "besides about a bushel more lying at the bottom of the cart." Her husband, the nominal keeper of the gang, was afterwards acquitted of a proved case of stealing only on the ground that he was of unsound mind, and had been in a lunatic asylum.

160. It is stated of a man and his wife, still in charge of large mixed gangs in the same place, that their "brutal tempers are notorious," and that "amongst other minor offences" by them, six of a violent nature have been dealt with by the magistrates, beginning only with the year 1857.

161. Other cases relate to offences against decency and morality, which I will not further notice here. A reference, however, to the cases of misconduct at the end of the evidence (Nos. 240–251), will show what kind of persons may now, if they please, fill a position on which the moral well-being of the young in their charge so much depends. Remarks are made there, and elsewhere, tending to show that cases brought to notice as offences are but instances of a larger number which, for certain reasons, are not so brought forward.

A system of licences suggested.

162. Accordingly it is very generally suggested by magistrates, clergy, and employers alike, that to secure gang-masters fit for the position, or at least to exclude any known to be unfit, no gang-master should be allowed to carry on the business without a licence or certificate of fitness from some local authority. As to the precise mode in which this should be granted various details are suggested. The better opinion seems to be that the licence should be from the magistrates on the recommendation of official or independent persons in the parish, prescribing certain rules to be observed, and renewable periodically, and to be liable to be forfeited on neglect of the rules or conditions prescribed.

Importance of this.

163. The fitness of the gangmaster for his position appears to be the most important part of any, and where this did not exist but little improvement could be carried out in other ways, as the working of any rules would ultimately depend so much on him. If there were some guarantee of his respectability, and of his observing certain rules laid down for regulating the mode of work and securing general propriety, much of the prejudice against the employment would probably be removed, more parents would be willing for their children to go into gangs, and more employers to engage them, and the position of gangmaster would be raised and likely to draw a higher class of men.

Benefit to boys.

164. There seems no reason why a set of boys working under the charge of a suitable and responsible man should not be really more favourably placed in regard to behaviour and discipline than boy working in other ways, and where such a plan has been tried the result is said to be very satisfactory.

Females.

165. For females field work must always, under any system, be open to some objections, and working in companies, even without workers of the other sex, can probably never by any care be made a satisfactory mode of employment for them. It must destroy a certain amount of natural delicacy, and take them from occupations more suitable to their sex, and in some degree unfit them for home duties. No doubt, however, girls and women are in many cases really needed for field work, and will as a matter of fact be employed in it, so that it is of importance to consider how that work can be made as free from objection as possible.

Females in charge of a woman.

166. Some persons are of opinion that not only should the sexes be separated, but that the females should be placed under the charge of a woman instead of a man. But it is not likely that the latter suggestion could be carried out as a rule. Occasionally women are found in charge of a gang, but it is few who would be able to control a gang of any size so well as a man, and those who could are not likely to be the most womanly or such as would exercise the best influence over children. This, however, would be no objection to requiring the presence of a respectable and responsible woman with each female gang under a man, and this might be a useful security for propriety of treatment and behaviour. She would be more independent than the children are, and having some recognized responsibility, might be expected to exercise it.

Sleeping out.

167. It has been remarked that no clear evidence was found of gang workers being now required to sleep away from home in barns or otherwise on account of the distance of their place of work, which has been alleged to be a practice. (See above, par. 91.)

Hop-pickers.

168. This, however, is a marked feature of the employment of hop-picking as carried on in the Farnham district, and probably it must, from unavoidable circumstances, be so in other great hop districts. The employment lasts only for a very short season, and far more hands are wanted than can be obtained from the neighbourhood. Large numbers of persons of the poorer classes come to the

Farnham district from Portsmouth, Chichester, Reading, and other distant towns or places. The more respectable find lodgings where they can, for others accommodation is found in barns or sheds, and some, probably a wandering population, camp out, as I have seen them doing, in vans or tents. In the buildings, I was told, straw is laid down for sleeping, and families can be hurdled off. According to well known common repute, the circumstances of the employment and the miscellaneous character of the workers are not favourable to morality. The appearance of a large number of the workers is very rough. On a Saturday evening the town of Farnham was thronged with them. How lodged.

169. Some walk from places more or less distant in the neighbourhood, as gang workers do, and may be seen coming home carrying on their backs babies and small children. I have also seen children conveyed home in a waggon crowded with them, just as in the case of a large gang. Travel like gangs.

XIII.—General Remarks.

170. It is not easy to say on what causes the existence of gang employment depends. The circumstances assigned as the cause in some places are found equally in some where the system has not existed, or where it has greatly declined or disappeared, and are wanting in others where it does exist. In the fen district it is said to be owing chiefly to the wide extent of uninhabited land under cultivation, and to the nature of the soil, which is supposed to require more weeding. But in Marsh-land, for instance, where the circumstances are much the same, the system has very much declined. Of different districts of higher lands with the same kind of soil and crops and the population distributed in much the same manner, the system prevails in some and scarcely or not at all in others. In some it exists where the villages lie at moderate distances. In some cases improved farming is said to make the need of the employment greater, in others less. In some it is said to be owing to the want of men's labour, but there are employers and others who think that the opportunity afforded by gangs of getting work done by women and children at a lower rate tends in some degree to displace the labour of men, and to be a cause rather than an effect of their removal. Causes of gangs.

171. Some large employers agree in saying that, "The real reason which leads to the employment "of gang labour is no doubt the desire or *supposed* necessity of saving something in wages, as the "readiest, or, in some cases, the only available means of lessening the cost of production," though in their opinion, this mode is not in the end so economical. (No. 68.) Over the prices of other things which he needs, a farmer has no control, and labour, as one remarked to me, is the only item in which they can attempt to diminish the cost. Supposed economy.

172. The system is said to enable employers to manage with a less number of persons in their permanent service, and hence to be more necessary where capital is small or the rent raised above a moderate level.

173. If the advantages from such an organisation and economy of labour are such as are represented and appear natural, it seems strange that the system, now that it has been known so many years in different neighbourhoods, should not have been universally adopted, not only in districts where it is known, but generally over the country. An employer was surprised to hear that in many parts it was unknown even by name. It seems, however, that any one agricultural district has but little knowledge of the practice of others beyond its own immediate neighbourhood.

174. It is probable that the want of a resident population may have led to the establishment of gangs in the first instance, and that when from any cause they have become firmly established in any one neighbourhood, they have a tendency to spread themselves to adjoining places. Hence, on the whole, it appears that they have greatly increased of late years. In some places they are said to have been introduced at comparatively late dates; in others, where gangs of some kind have been known for many years, it is said that more and younger children are employed in them than formerly. Still in several neighbourhoods where the plan has been known or tried, it has been given up or has declined. Increase of gangs.

175. In many cases it appears to be very much a matter of accident whether a gang exists or not at a place at any given time. If there happens to be a man ready and competent to take to keeping a gang, it is kept up and finds employment; if he dies or gives it up and there is no such man ready to take his place, the gang disappears, and employers manage very well without. A marked instance of the gradual decline and disappearance of gang work in a populous village, even where there is a competent gang-master, is given in Nos. 129 and 145. The reason there given is that enough hands cannot be got. In this parish great personal attention is given to the schools by the incumbent. In some cases a diminution of gang work is attributed to merely moral influences brought to bear against it, other circumstances remaining the same, or to some accidental or temporary causes. Accidental rise and decline.

176. The objections entertained against public gangs on moral grounds, and the disadvantages arising from the want of direct control over them by the farmer, have in many cases led not to the discontinuance of combined employment, but to a change of its form by the establishment of private gangs in place of public. By means of private gangs farmers get the advantage of the organized labour of children and females while having the entire control of both overlookers and workers in their own hands. They can select a suitable man as overlooker, and employ either children alone or either sex alone as they please. Only large farmers, however, can keep up a private gang of any size. Some do keep a small set generally at work, and some engage a few children only for occasional purposes, but many find it more convenient merely to engage the public gang when they require it. Private gangs have become more general, but it is likely that the convenience of public gangs will in general secure their continuance. Origin of private gangs.

177. In this way and through the influence of public opinion directed to the condition of gangs, a considerable improvement in their character is said to have taken place. A feeling against females following field work, where it can be helped, is common, and is shared by many employers as well as by other classes. Improvement.

178. A reason commonly given is, that it unfits them, and gives them a distaste, for domestic service; but so far as the cultivation of land cannot be carried on without the assistance of females, or could be Effect of gangs on domestic service.

carried on by them in a way reasonably free from serious objection, it does not appear why it has not at least as good a right to the benefit of their labour as any other kind of employment.

B. Migration of population.

179. The growing want of adult male labour, especially of the better class, in these agricultural districts, and more particularly of late, is referred to by employers and others, and is said to make the labour of women and children of more importance. The increased facilities of communication and locomotion and the existing rate of wages are constantly drawing off numbers of the young and active to more promising fields of employment in London and big towns, or in "the shires," and families of children are in request and said to be sought out for manufacturing towns. The population so far from increasing is said in some cases to have greatly declined. I have not thought it necessary on such a point, not directly falling within the limits of my inquiry, to refer to the last and former census tables to see how far this is the case, but the statement coincides with my general recollection on the point.

Growing scarcity of men.

180. Lord Leicester speaking to employers in Norfolk, says, "I believe the scarcity of labour we are "now experiencing is merely the commencement of what will be seriously felt in agricultural districts "unless an immediate remedy is applied." (No. 226.) The agent of a landowner in Suffolk, says, "The labour question in some agricultural districts, particularly the arable, is becoming so serious in "consequence of emigration, and the facility afforded by railways for getting to large towns, that I "think the services of the children are most indispensable." (No. 131.) An employer in the fen district gives the same kind of account.

Want of cottages.

181. The want of sufficient cottages on or near the land for its cultivation, and the effect of this on labour, in gangs or otherwise, have been pointed out to me by competent persons, and remarks on this point will be found in the evidence. (See Nos. 201 and 208; also, Nos. 60, 116, 194, 195, 226, 232.) Lord Leicester points out that, for the growing scarcity of labour to which he refers, "the only "remedy is to build, as speedily as possible, sufficient cottages," and adds, "I have no hesitation in "saying, that where there is a deficiency, the supplying that deficiency is one of the best investments a "landlord can make," of course if done in a suitable way.

Opinions on education.

182. The obstacles to education arising from the general employment of children in gangs and in other farm work have been noticed, and the facts are not matter of much dispute. Opinions, however, differ as to the importance to be attached to them, and the remedies, if any, to be adopted. In an agricultural district it is natural that a feeling of the importance of education for the labouring class should be less strongly expressed, except by those directly concerned in carrying it out, than in manufacturing towns. The labour is less skilled, the class is poorer, the earnings of the children bear a higher proportion to those of the head of the family, and their chance of rising to higher positions appears less, and therefore their going young to work may be thought more essential for their support, and less likely to injure their prospects.

Employers and the poor.

183. Many employers, however, show a wish that the benefits of education should be more general, and few, probably, would be opposed to any reasonable plan which did not interfere seriously with their interest. The poor themselves express a strong desire for the education of their children, even where, as is often the case, they feel unable to make the sacrifice required by giving up their earnings. From the circumstances of the employment, as described, it seems that any limitation of the working hours of children for the purpose would concern agricultural employers less nearly than it might manufacturers. No equal inconveniences or difficulties in the requirement of a certain amount of school attendance from young children are pointed out, though there are certain difficulties.

Objections made to any half-time system.

184. Some of these difficulties have for some time past been much considered and discussed in these districts, and I was told that the general conclusion, even of those most anxious to promote education, such as the clergy, was that any system of half-time education was impracticable. This opinion, however, is not shared by all. Many, also, seem to understand a "half-time" as meaning only a "half-day" system. A fair representation of the views of the clergy on the possibility of combining employment with education, will be found in the Report, quoted in No. 229. The chief difficulties insisted on are those arising from the uncertainty of the seasons and the weather, and the want of all available hands at special times of the year, or on favourable opportunities; the frequent distance of the place of work from the school; and the often wet and dirty nature of the employment, which might make the workers unfit to come to school, or at least without change of clothes, &c. The want of suitable persons in a village to see that any rules for regular school attendance were carried out, and, if necessary, to enforce them, may be added.

How far valid.

185. Part of these apply only to the case of work and school on the same day, not to a requirement of school attendance on alternate or less frequent days. As to the distance of the place of work, even a requirement of school attendance for part of every day, if its practical effect were indirectly to prevent the employment of children at more than a moderate distance from home, could scarcely be thought an evil. The uncertainty of seasons and weather, however great, is not greater than that of trades is said to be, and any one farmer, from his knowledge of his crops and the order of nature, can better foreknow what labour will be wanted for his land throughout the year, and to arrange accordingly, than any one manufacturer can judge what will be wanted by him; little skill would be required in hands taken on at times of exceptional pressure. At such times the labour of a portion of the children, say half of those under the age of 13, can form but a very small portion of the whole which he employs, and at ordinary times there would not be likely to be a sensible deficiency.

Measures suggested.

186. The plan which seems to be thought most practicable is to forbid the employment of children under a given age, as 10 or 12, relying on the help of night and Sunday schools after that age to keep up the education already received, and if any amount of subsequent day-school attendance is required, to leave a wide liberty as to the times at which it may be given, according as may best suit the requirements of work. It is further suggested that a certain standard of attainments, or at least a certain amount of previous school attendance might be required as a condition of entering employment. These are only repetitions of views which have been advanced by others and considered by you in the case of other employments.

187. The facts and arguments, however, advanced in Nos. 70, 71, 220, and 221, on the subject of any enforced regular school attendance, deserve notice.

188. The opinion of the impracticability of any form of half-time system, which is shared by many of the clergy, may possibly, in the case of some, be unconsciously influenced by their anxiety to have their schools in as high a condition, and the education of as complete a kind as possible, and a fear that this might be interfered with, and the standard lowered, and difficulties in the course of teaching caused by the introduction of scholars attending less frequently, and likely to be less orderly as coming from out-door work. Schools, however, are no doubt for the sake of children, and especially for those who are most untaught, and not children for the sake of schools.

Experience of schoolmasters on half-time.

189. Schoolmasters who have had some experience of half-time in schools, two with factory children, one with farm boys, do not entertain such a fear, but say that the work can be satisfactorily arranged, to meet such a case (Nos. 136, 213*a*, 232, 233). Of these the remarks in No. 213*a* will be found worthy of particular notice. The opinion of another master trained in factory school is that though this system is "the best theoretically," yet practically in the agricultural districts a different and less regular system is required and would answer best (Nos. 220, 221).

Want of schools in some places.

190. Some difficulty might arise from the fact that some places have no parish day school within reasonable distance or none at all. In one hamlet having a gang I found a mother who had sent a child eight miles daily to and from the parish school, *i. e.* four each way, there being a school only two miles off, but in another parish, and a much higher payment would have been required there.

Schools closed.

191. The village school may not be open on Saturday, and children are found much fresher for teaching in the morning half of a day, when consequently the more important lessons may be given. Hence, in the event of any requirement of periodical attendance, some alternation of days or hours might be desirable.

Mode of enforcing regulations.

192. In the event of any regulations being laid down for the school attendance of working children, some difficulty might arise from the scattered nature of the employment as to the means of enforcing such regulations in case of their being neglected, or the persons to be charged with this duty. The usual parish authorities are likely to have too direct an interest in the matter, the clergy in the schools, and the others as the principal employers of farm labour. It would be invidious, and take much from the influence of either the clergy or the schoolmasters in such matters, for them to apply to the legal authority for compulsion. Such a duty would probably be thought foreign to those of the Government school inspectors, and, were it not, this would leave many parishes unprovided for, *e.g.*, 27 out of 30 in one rural deanery (No. 70). It is suggested that some special official inspection would be required, and that the names and attendance of children employed should be entered in a register to be inspected.

Moral support of ditto.

193. In the case of field employment, mere occasional inspection by a generally absent official would no doubt be insufficient if it stood unsupported in other ways. It is, however, said, and seems probable, that, if such regulations existed, they would in fact be to a great extent observed without the need of resorting to legal authority. The endeavours which those interested in education, such as clergy and schoolmasters, now use with parents whose children fail in regular school attendance, would be much strengthened if the appeal could be made not only to a moral duty, which at present perhaps is by many felt but vaguely, and at any rate as less pressing than their immediate wants, but further to a plain legal requirement capable of being enforced. A law resting on a moral ground not hard to be understood commonly meets with support, and the mass of parents probably would be unwilling to be liable to be pointed at by their neighbours as getting an advantage over them by breaking a known law. It may well be that some would even be glad of such a law as a support to their own true wishes (No. 227). If the law were not completely observed it would, it is said, probably be complied with sufficiently to make at least a great improvement on the present state of things.

194. Mr. C. Paget, who has long considered the subject, and carried out his opinions to interesting practical results, remarks:

"I acknowledge the difficulty of applying compulsorily the principle of the Factory Act to agriculture, because inspection would be impossible; but the clergy and schoolmaster would, I trust, feel themselves the guardians of the children, and might, with the assistance of the police, secure a general obedience to the law."

Mr. Paget's system.

195. Mr. Paget's experience as to the half-time attendance of boys engaged in agriculture was made public several years ago, and has attracted attention. The only change which a longer time has made in his views has been to confirm them more strongly. His paper read before the Social Science Meeting, 1858, and his letter of this year will be found of great interest. (Nos. 231, 232.)

196. It is fair to remark that his experiment has been carried out only on a small scale, and from his position probably "under exceptionally favourable circumstances," and therefore may not show that the same system could be generally adopted with equal ease. But as to the beneficial effect on the boys, in regard both to work and school and in improving their condition in after life, it appears conclusive.

Another case.

197. An experiment of something the same nature, in the case of a gang of boys, is mentioned in No. 224. The boys were not employed under 10 years of age, and not then unless they could read and write, and they attended school two hours each morning before work. Their employer adds that at 6*d.* a day, "I always thought their labour very cheap."

Experience of half time.

198. It will be observed that those witnesses who have had practical acquaintance with the working of a half-time system agree in their approval of it and their desire for extending it, and Mr. Paget instances cases of its voluntary adoption by the poor themselves.

199. It is pointed out as an anomaly, that the employment of children in field work is left unregulated while that in factories is regulated; for it is still a common and not unnatural belief in the country, and not only amongst uneducated persons, that all factories are included under the Factory Laws.

Regulated employments prejudiced by unregulated.

200. A manufacturer in Nottinghamshire, Mr. W. Hollins, complains of the disadvantage at which he and other manufacturers in rural districts are placed by being subject to the half-time regulations, while employment in agriculture is free from any such restrictions (No. 222). His remarks on the effect of the employment of gangs have a more general bearing:

"The 'gang' system on farms has so simplified and economized the work of children on the land, that the demand for their labour has of late increased materially, very much to the inconvenience of the mills. We have just advanced the wages of children under 13 twenty-five per cent. in order to attract them to our employment; but we still fear the restrictions as to the time worked and compulsory school will be obstacles to their darents, and prevent any applications for mill work."

201. He hopes that means may be suggested by which "the half-time and school system may be " adapted to farming occupations," and ends with a practical remark that "as it seems quite practicable " to organize *troops* of children for labour, I think it might be equally easy to attach educational " conditions to their engagement." It is right to add that Mr. Hollins' views appear to be the result of a regard not to private interest alone, but also to "the progress of education among the working " classes," on which, in his opinion, as well as on his own property, the exemption of the land from any such labour restrictions, has "a most unfavourable effect."

202. Mr. Paget refers also to the same point, remarking, "every application of the system to other " labour makes the regulation of farm labour more imperative," and that even "factory education in " rural districts is very imperfect," from the fact that the younger children are kept from mills by the whole-time work of farms.

General suggestions.

203. For the general regulation and improvement of gangs a number of thoughtful and important suggestions are made, and will be found scattered throughout the evidence. Some of those given most in detail are contained in Nos. 79, 89, 128, 140, 142, 143, 159, 167, 171, 172*a*, 201, 203, 205, 206, 213*a*, 221, 229, and 235.

204. Of the gentlemen making these recommendations according to their various means of knowledge, some have given more special attention to the subject and had unusual opportunities of making themselves acquainted with it. Without taking from the weight of others, I may refer in particular to Mr. Hopkins (No. 172*a*), who shows the wide basis on which his opinions rest, Mr. Hutton (No. 167), who has studied the subject and received communications in a like extended manner, and Mr. G. M. Smith (No. 171), who speaks of the personal inquiry made by him some time back into the working of the gang system and his report upon it. The Report also, No. 229, represents a large amount of experience and thought, and the same must doubtless be the case with the Petition, No. 235, having been drawn up in the way described in No. 234.

Educational measures required.

205. With regard to educational recommendations, whatever may be thought as to the kind of measures which would be best to adopt or the difficulties of carrying them out, it seems clear that without some alteration of the present state of things in regard to the employment of children in the manner described, there is little or no hope of their education being made general and effective.

Illustrations of this.

206. The remarks of the Rev. R. Baker after 30 years experience as vicar of a parish in Suffolk, point strongly to this:

"In general as to the education of the children of the poor in agricultural parishes, I feel from long observation that the most effective school machinery can never affect for good many of the children of the labouring hands. The reasons are (early labour and neglect by many parents, J. E. W.) * * * Some scheme to make it obligatory on parents to place their poor neglected children under some elementary instruction is absolutely necessary. Many interests clash with such a provision, but the necessity is manifest and absolutely urgent." (No. 159.)

207. Mr. W. L. B. Freuer, agent of large estates in Suffolk and Norfolk, gives his opinions much to the same effect as "the careful and deliberate result of 40 years constant and active experience " amongst the agricultural poor." (No. 141.) Speaking of the parents of working children, he says:

"Their material wants so far overrule their views on school attendance, that it is utterly impossible to contend with them against it, and it will always remain so until some legislative interference is brought into operation to enforce the attendance of children between 9 and 13 years for a certain portion of every workday for the purposes of education." (No. 140.)

208. The Rev. W. P. Roberts, referring to his experience of half time in a large manufacturing town, and the amount of ignorance which has since come to his notice where he is, says, from this "I deeply " feel the necessity for compulsory education;" and recommends for agricultural districts a requirement of whole-time education from the age of 6 to 10, and of a modified half-time from that of 10 to 12. " Compulsory education is as necessary and as justifiable as compulsory vaccination; both are " preventive measures." (No. 128.)

209. It does not seem easy to deny the soundness of the remark with which Mr. Hutton concludes his statement, quoted above (par. 140), as to the general neglect of the educational advantages now afforded, which under the present state of things exists and according to his experience is, with the demands of labour, lowering year by year the ages of the children receiving education. "Surely some " further curtailment of liberty in this matter of national education would not be incompatible with " the true advancement of freedom." (No. 167.)

Conclusion.

210. In conclusion, I would venture to submit my conviction that the effect of the whole evidence is to show that the limited question which has formed the subject of this inquiry is but part of and mixed up with a much wider question relating to the general employment and condition of the agricultural poor, and that any measures would be very imperfect in their nature, as well as much more difficult to carry out in practice, especially as regards the details of any scheme of education, if such measures were limited only to the mode of agricultural employment commonly known by the name of the Gang System.

I have the honour to be,
Gentlemen,
Your obedient servant,
J. EDWARD WHITE.

31st December 1866.

Evidence on Agricultural Gangs, collected by Mr. J. E. White.

1. *Statement furnished by the Rev. W. T. Beckett, Rector of Ingoldsthorpe, Diocesan Inspector of Schools.*

I. The Gang System.

Definition of a Gang.—By a gang is meant a number of persons, men, women, girls, lads, and boys, employed by and under the control of one person, who lets them out to different farmers in turn for certain kinds of work.

Different kinds of Gangs.—In some of these gangs the males and females work together, in other gangs they are employed separately. The first of these systems is the most common. A gang will number from 12 to 30 persons.

Age of those employed.—The age of those employed will vary from eight years, and even sometimes younger, to grown up and married persons.

Work in which Gangs are employed.—Hoeing up or removing by hand-picking weeds of various kinds, especially twitch, red weed, docks, and thistles, stone picking, hoeing up and thinning out turnips, swedes, and mangolds, and topping and tailing them.

Duration of Labour.—Generally from 8 in the morning to 5 in the afternoon, but the gang may be kept later, as the gangman marks out in the morning a certain portion of land, which must be cleaned, hoed, or the crop thereon topped and tailed before he dismisses his gang. One hour is granted for dinner in the middle of the day.

Distances at which the Gang may be employed.—The gang will often have to walk three, four, five, or even more miles before it commences its work, and will have in the evening to return the same distance. As the gang however is sometimes made up of persons from different villages, some of these may have even farther to go.

Rate of Wages.—4*d.* a day to children, 8*d.* to lads, girls, women, and even men. These latter however seldom belong to a gang, unless partially disabled by illness or some bodily infirmity and incapable of performing the full amount of work required from an able-bodied man.

Advantage of Gang to Farmer or Employer of Labour.—It enables him to dispense with a certain number of labourers, as were it not for this system he would be obliged to keep a greater number of regular labourers, or else either entirely omit or defer too long much important work. By this system he is able to procure assistance exactly at the time he requires it, and the work is quickly and expeditiously done.

Another advantage is, the gangman acts as foreman or overlooker without receiving any extra pay for so doing, and the employer, when the work is completed, has merely to look over it, and if satisfied to settle with the gangman; if dissatisfied he requires the gangman to go over the work again, or else refuses to pay. The gangman therefore for his own interest takes care that the work is fully and properly done, especially as if it becomes known that he is careless or inattentive he will not be employed by other farmers. Thus the employer gets the work done often at less expense, and with much less personal trouble to himself.

Profit made by the Gangman.—The gangman makes his profit in this way. Generally he takes a field at so much per acre for the work to be done; he then divides it according to the number of his gang into so many days' or hours' work, requiring from each person employed a full day's work, and paying a proportionately smaller day's wage than would be otherwise obtained. Thus, if a boy or lad could earn 6*d.* a day, the gangman pays only 4*d.*, putting into his pocket 2*d.* a day, or 1*s.* a week. Thus the gangman over a gang of 15 or 20 persons can make in addition to his own week's wages from 15*s.* to 1*l.* This extra pay comes entirely out of the earnings of those employed, and saves the employer the expense of a foreman or bailiff. In other cases he is paid by the day.

Injustice to the Labourer.—From what I have stated it is clear that the persons employed are deprived of part of their fairly earned wages. Besides this they have often, to use a Norfolk phrase, "to play," that is, to remain unemployed on wet days, or when the weather is not altogether suitable for the kind of work required. Thus the amount of weekly wages earned is very precarious and differs greatly.

Disadvantages of the System.—To the poor man it displaces labour and renders it less.

To the employer it renders it more difficult each year to procure steady, respectable, and efficient labourers for other kinds of farm labour; it also renders the labourer in some degree independent of the employer, as if he is discharged for insolence, insubordination, or other faults, he knows that he can procure temporary employment, though at reduced wages, in these gangs.

To those employed:—physically, morally, spiritually.

Physically.—As gangs can be most profitably employed on large farms, such as those in marshland and fenland districts, as those of Norfolk, Cambridgeshire, and Huntingdonshire, where the population is thin and where the villages lie at great distances from one another, and farm houses are dotted about here and there separately, the gang is constantly placed in situations where they can procure no shelter from rain or inclement weather. Some of these gangs in situations such as I have mentioned will be brought to the place where they labour in carts. Both in this case, where expense is incurred, and also where the gang walks to its work, the gangman having his gang on the spot is unwilling to dismiss it, even though the weather should prove inclement, and therefore often continues to employ it to the end of the day. The result of this is, that those so employed are subject to ague or intermittent fever, rheumatism, scarlet fever, pleurisy, and may eventually become consumptive. The taking of the mid-day meal whilst seated on the ground, frequently damp, is a further cause of illness. Now, if the strong are affected injuriously by labour under such circumstances, children, girls, and the more delicate among the women are even more liable to severe maladies arising from the causes mentioned. I do not scruple to affirm that the employment of child and women labour in the fields has a tendency to shorten life in those classes, and to give rise to constitutional diseases, which either terminate fatally at an early period, or incapacitate the sufferers for work for the remainder of their lives, and so increase in a great degree the burden of the poor rates.

Morally.—As the gangmaster makes no inquiry as to the character of those he employs, the gang will sometimes include idle labourers who dislike regular and sustained employment, young women of an immoral character, married women of slatternly, immodest, and idle habits, and young children, whom from their early age, small size, or weakness, the farmer himself would judge incapable of employment. In a gang of such a character it necessarily follows that even those who were steady and respectable when they joined it must become corrupted. Where the gang is mixed, where I mean males and females work together, the evil becomes greater. The dress of the women is to a certain extent almost of necessity immodest. When the crops are wet they tuck up their dresses between the legs, often leaving the legs much exposed. The long absence and distance from home often render it

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necessary that the women should attend to the calls of nature, and this they frequently do in the presence of the lads, boys and men. Thus a girl or woman who is when she first joins these gangs modest and decent gradually loses her modesty. This and the bad accommodation afforded in our labourers' cottages are two reasons, I believe, for the prevalence of fornication amongst the agricultural class of labourers, and the consequent numerous cases of bastardy. As the women employed in these gangs are frequently of the character I have described, the conversation which takes place in the meal hour, and whilst going to and returning from work, is of the worst character, and tends greatly to corrupt the character and feelings of others who were more moral and better disposed. Thus the gang system is the cause of a moral pestilence. The conduct of the women and girls belonging to a gang, whilst travelling to and from the work, is often offensive even in the most public places to the passers by, and their remarks and coarse language distressing and annoying. The character of women so employed in their own villages is generally indifferent. As mothers they are slatternly, careless about their domestic duties, indifferent as to the conduct of their children. Girls thus employed can seldom obtain employment afterwards as domestic servants. To say that a girl has been employed in the fields, in gangs or otherwise, is generally sufficient to cause any one above the class of the smaller farmers and tradesmen to reject her application for service.

Religiously.—With so many evil influences at work upon the character it is not to be supposed that persons thus employed will be religious. The clergyman, however anxious to discharge his duties, has few, if any, opportunities of seeing them or conversing with them. They go out so early and return so late that he can seldom find them at home, and if he does so, they are not disposed to listen to any remarks he may make about their conduct or religious duties. Even if night schools for females were common in our country villages, it is doubtful whether they could or would attend them. Their impatience of restraint, their bodily weariness, and their want of application, would be all causes to prevent their attendance. To a certain though not so great an extent this is true with regard to boys and lads thus occupied. If they get home in time to get their evening meal and then attend the night school, they frequently fall asleep from bodily fatigue; or if they keep awake their attention quickly flags, their progress is slow and laborious, and after a a time they become disheartened and desist from coming. The night school can never take the place of the day school; it may become supplementary to the latter in maintaining the knowledge and information already acquired, but it is of little use in giving education to those who have before known little or nothing. As a means of spiritual improvement the night school is almost useless. Boys, lads, and even men, when an attempt is made to introduce religious instruction, frequently say they don't come to be preached to, and if the religious instruction is persisted in they leave the school. With views of this kind they are not likely to attend places of worship, and they often spend the Lord's day either in utter idleness or in vicious pursuits. From inquiries I have made I find the females will in the evening go to the meeting houses, but not for the purpose of spiritual edification and religious improvement, but, as one of them acknowledged to me, that they might meet the young men and walk home with them. The going to the meeting house is, I fear, often a mere excuse made to the parents that they may obtain these Sunday evening walks.

The employment of children and women and girls in field labour, whether in gangs or otherwise, is, in my opinion, an opinion founded upon four and twenty years' experience in various rural parishes in different counties, prejudicial both in a moral, religious, and politico-economical point of view, and should be therefore checked and regulated as far as possible.

II. EMPLOYMENT OF CHILDREN IN FIELD LABOUR.

How employed, otherwise than in gangs.—In crow keeping and scaring birds from the wheat and other crops; in leading horses; in picking out weeds by hand; in cutting turnips and feeding sheep; in watching cows and sheep in the highways or in fields; in putting food, when prepared, before bullocks in the yard.

Age at which they commence.—Generally about 8 or 9 years of age; but I have seen children of 6, and even as young as 4 or 5, birdkeeping.

Duration of Labour.—As the birds feed chiefly in the early morning and late in the evening the children are often in the fields at 5 in the morning, and continue till 6 in the evening.

Wages.—Threepence, fourpence, and sixpence a day.

Education.—None. When such boys come in after years to the night school they are perfectly ignorant in every respect, their intellects are dulled, and the labour of teaching them becomes much greater.

Religious Instruction.—None. These boys are at certain seasons constantly employed the whole of the Sundays in feeding bullocks or birdkeeping.

Conduct.—Bad; they contract idle habits. I allude especially to birdkeeping boys, and those employed in tending cows and sheep on the highways and lanes. Boys so employed frequently find opportunities of meeting together and occupy themselves with gambling and all other kinds of mischief. They learn to swear, and become disobedient, insolent, and troublesome.

EVILS arising from too early EMPLOYMENT of BOYS in the FIELDS.

Physically.—Exposure to weather injures the constitution, and sows the seeds of diseases which develope themselves at a later period, such as asthma, affections of the lungs, confirmed rheumatism, &c. Of six grown-up men who have died in this parish in the last 10 years (the parish has a population of 370), all have died of diseases arising in my opinion from exposure in early life to the severity of the weather; one, aged 37, died of pleurisy, but for some time before he had been completely broken down and looked an old man; another, aged 39, died of consumption; another, aged 58, of consumption; another, aged 52, of asthma; another, aged 53, of Bright's disease, which the medical man pronounced to be the result of constitutional disease arising from exposure to cold; and another, aged 56 years, of rheumatic fever.*

Our lads and young men who have been employed too early in field labour become prematurely old, and at 26 to 30 years of age begin to look old men.

Moral Evils.—These I have already stated under the head of conduct, but I would add that they become disobedient and disrespectful to parents. The only influence brought to bear upon them is that of fear; there is no moral influence. The moment they begin to earn their own living they cast off all respect for their parents; and if the parents remonstrate with them, or try to restrain them, they leave the cottage and obtain lodgings elsewhere.

Religion.—I have already stated they have none; they are virtually heathens. I have examined boys of ages varying from 14 to 20, both in the night school and in trying to prepare them for confirmation, and I have found them perfectly unacquainted with the simplest religious teaching. They did not know there was a God who made the world; they had not heard of a Redeemer; they could not say the Lord's prayer, the Belief, or the ten commandments; in fact the Bible and all it contained was a sealed book to them.

Contrast between Boys educated in the Day School and these Boys. Improvement of Population by Education.—Ten years ago, when I came to reside in this parish, which then had no day schools, the resident magistrate and the policeman, who also lived in the village, described it to me as a sink of wickedness. The conduct of the lads and boys was unbearable. No female could walk through the streets without being insulted; and one farmer told me that his wife was afraid to come to church on account of the indecent and improper language addressed to her by idle lads and boys assembled at the different corners. Obscene and indecent expressions were written in chalk on the walls; lads, and almost boys, were seen drunk in the village street; drunkenness and swearing were common amongst the men; many of the women were or had been unchaste; the church was neglected, and the Sunday was spent by the men and lads in all kinds of riotous sports and employments. All this is now changed, a complete reformation has been effected, and principally I firmly believe by the agency of the schools. The lessons of order, decency, morality, and religion the children learn in the schools they carry with them to their homes, and almost imperceptibly they work a change in the feelings and ideas of their elders. The work and good influence of the school does not end in the school; it pervades the parish, and year by year a great and beneficial improvement is effected. The statement I have made is confirmed by the testimony of the managers of other schools in this deanery, who speak of similar improvement in their villages. Where schools are established, and this change is not felt, it is because the school is either not properly cared for or conducted, or where there are obstructive influences at work, as in the case of those farmers and country gentlemen who have been always prejudiced against the education of the poorer classes, and who attribute all the evils which exist, not to the want of education, or to an imperfect and irregularly conducted education, but to education itself. I am glad to say that there is a marked difference in the conduct of those who have been properly educated in our schools, and have remained in them till 13 or 14 years of age, and those who have not been so trained. The former, both boys and girls, have retained their places and been commended by their employers, whilst the latter have been constantly changing their situations, and as a general rule prove indifferent servants.

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* These six deaths were the only deaths of middle-aged men in 10 years.—W. T. B.

Advantages to Farmers of Child Labour.— Two good-sized boys can often do the work of one man, and are made to do it. Their wages are from 3*s.* to 4*s.* a week, the man's from 10*s.* to 11*s.*; therefore there is a clear gain to the farmer of from three to five shillings a week. On one farm which I know, and I believe there are others similarly managed, there is scarcely one man employed, and the wages of the lads and boys who are employed as ploughmen and team men are from six to eight or nine shillings a week, whereas men would earn from 10 to 11 shillings a week.

Opposition of Farmers to Education, reason for.—On this ground alone many farmers oppose the education of children in our day schools; but the result of the employment of child labour is, that the adult labourer is obliged to leave his home and seek support elsewhere. Several such instances have occurred in my own small village.

Answers to some Objections against Education urged by some Farmers.—I do not believe that a boy being kept to school till the age of 12 will in any degree impede his efficiency in farm work, as some farmers state it would; on the contrary I think that his intellect being sharpened and his mind raised will enable him both to understand the nature of machinery, and so to employ it properly and regulate it better than he could if he was not educated. His being able also to write and keep accounts will render him more generally useful. In this matter I speak from experience, as one of my difficulties in cultivating my glebe land has consisted in not being able to obtain a person sufficiently educated to keep accounts, or to keep a reckoning of the consumption of various articles of food. Agricultural labourers, and many of the farmers too, farm, if I may use such an expression, in the dark. One great objection that farmers have to education is that the labourer becomes able to understand his rights, and thus instead of being a mere piece of machinery or a slave, as he was formerly, forgetting his sorrows or cares in the beer pot, he becomes a reasonable and properly independent labourer, a sober and respectable man.

Greater Employment of Boy Labour every Year.—The employment of boy labour during the last few years has been progressively increasing, as shown by the fact that in this deanery fewer boys are now taught in the schools than there used to be, and that they quit school at an earlier age, and that the number of boys taught, as compared with that of the girls, has been gradually becoming less.

III. FEMALE LABOUR IN THE FIELDS.

Two Classes of.—This may be divided into two classes, that of the married women, and that of the single women.

Injurious effect on Married Women.—Being employed from 8 in the morning till 5 in the evening they return home tired and wearied, and unwilling to make any further exertion to render the cottage comfortable. When the husband returns he finds everything uncomfortable, the cottage dirty, no meal prepared, the children tiresome and quarrelsome, the wife slatternly and cross, and his home so unpleasant to him that he not rarely betakes himself to the public house, and eventually becomes a drunkard. The wife becomes indifferent about her personal appearance, neglectful of her domestic duties, and careless of her children. Those who visit the cottages of the labouring poor will invariably find misery and discomfort in those homes where the wife is employed in field labour, as compared with those where the wife stays at home and attends to her domestic duties. The moral and religious character of the female labourer in the fields is also worse.

Injurious to Single Women and Girls.—This class of female labour generally consists of young girls who have been refractory and disobedient in schools, and who having been punished or threatened with punishment in consequence, are removed from the school by foolish mothers who back them in their disobedience. They are for the most part self-willed, headstrong, and idle, and these bad qualities are not eradicated but rather encouraged by their employment in field labour. They are fond of finery and amusements, and are often in consequence led into sin.

Another class of female labourers consist of those who having been thus brought up are seduced and become the mothers of illegitimate children. These take to this mode of labour for support, and because it affords them leisure time in which to seek amusement. They are their own mistresses, and are under no control or restraint; they labour when they please, and are idle when they please. With all these the fact that the field labour is not continuous, but that it takes place only at intervals, is a great inducement to their following this kind of employment instead of seeking domestic service. A girl or young woman who follows field labour is seldom really respectable, and is generally fond of gossip and idle amusements. Of course if they marry they make bad wives and careless mothers.

Physical Injury.— Those women who labour in fields become prematurely old, and are subject to many constitutional diseases, which either shorten their lives or render them dependent for the greater part of their lives on the Union for support.

The employment of women in field labour is injurious to them physically, morally, and religiously.

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2. *Thomas Parkins* (gangmaster), Swaffham.—I have been a ganger here nearly seven years. I take my gang to work on the lands of any farmer that engages me, and he pays me according to the number of workers which I bring, at so much a head, with a certain sum for myself; or else it is "taking" work, *i.e.*, I contract to do the work for him by the piece.

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I employ both girls and boys, in summer probably as many of one as of the other, but in winter I have hardly any girls. For three months last winter I had not one. Most of the work they can do as well as boys, and some, where quickness is wanted, as in picking, better; indeed, I have known girls who would quite throw boys on their back. But I know that girls cannot stand exposure to the weather so well as boys. I should be very glad to see the time when girls need not work out of doors at all, because they do not make good housewives after it, at least if they remain at it long. If a girl leaves a gang at 14 or 15 she goes to service, and does well; but if they stay longer they get that lenience and liberty that they can never settle down to make good housewives. In winter time I drop off the younger children.

The fullest number that I have had at one time is about 40, but that is too many to attend to in one gang. About 15 or 20 is as many as I can manage well, and when I have many more I divide them into two gangs, getting my brother to help me by taking charge of the other. I would not superintend much more than 20 if the farmer would give me double the wages. It is seldom worth while to keep up the gang with less than 10 or a dozen.

The youngest children that I take are about 8 years old. The children's wages generally, *i.e.*, from that age up to about 14, are 5*d.* a day. Over that age some boys and girls get 7*d.* and 8*d.* a day; 8*d.* is full woman's wages. Formerly children got 1*d.* less, but they were risen when the railroad was erected, probably because men's labour became scarcer. So far as doing the work is concerned, if I had my choice, I would not take children till they are about 10. I know that they are no good to the master or themselves earlier, but I find from experience that by beginning about then they are more skilful than others who begin at, say, 12 or 13. Now and then a father and mother are more independent, and can keep their children at school till then, and these I find more awkward, at least at first; after a year or two there would not be much difference between them.

There is work of some kind for my gang during most of the year, even in winter, except when there is frost or snow. Then the only work is perhaps for half a dozen or so of the bigger boys in topping and tailing turnips for food for sheep, &c. From now, October, to March the work will be chiefly pulling and topping and tailing mangolds and turnips, forking twitch, and stone picking; then picking and burning twitch, puddling thistles and docks, weeding corn and other kinds of weeding, and this with singling mangolds and turnips, and so on, will last up to harvest. Sometimes we have to weed corn when it is as high as the children, because it was not done before, but some farmers would sooner leave it altogether then, so as not to injure the corn. But if the weeds are taken out it prevents their seeding. I do not like to go in to weed too early in the morning, because the dew is so wet; it hangs particularly on barley, but by 8 o'clock, say, it is off. Last time, owing to the dryness of the season, which made things very late, I kept my gang on through harvest. Some of the younger children could help at drawing bands from the corn to bind the sheaves with, and some of the bigger might gather. After harvest comes forking and clearing the land, and so work goes on up to now again. The work in the neighbourhood is done in much the same way, except that it may be a little different, according to the produce of the land, *e.g.*, some miles from here potato land begins, and on that there will be potato picking. If the children were working separately and not in a gang they would either not do the work at all, or not enough of it. I was a boy myself, and know that I was very fond of play. That is my view, at least, though of course I am a gangman, and it may be said that I think accordingly.

The farmers reckon for eight hours' work a day. We are supposed to be on the ground at 8 and leave at 5, stopping an hour for dinner; but sometimes, especially in winter, when the days are short, we do not have dinner, but just take a snap and go on with work again, and then leave off earlier, *e.g.*, at 4, if we are near home, and at 3 if far off. I always manage so that anyhow my hands can get home by dark. The distances to which we go to work vary, say, from half a mile up to three miles, and we work either in this parish, or, if work is short here, in others, such as Narford, Beechamwell, or Cley. I should say that when we go far I pay 1*d.* each extra, for I reckon that the walking is as bad as work, or worse. At first I used to try to see the children home, but found that I could not keep that up; they loiter about birds'-nesting, or blackberrying, or anything.

If work is very full we make up five quarters, beginning at 6 a.m., but perhaps with only the biggest children; the little ones, with me, however, may come on at the proper time. We never work beyond 5 p.m., except as extra time, and then never beyond 6 p.m.

As for tiring a child, I believe there is no such thing with children of that age. Sometimes when I have thought that a little one was tired I have spared him as much as I could (for after all the farmer is my master for the time, and entitled to the work of the full number for which he pays) by letting him sit down to rest till we came up again, so saving him, perhaps, a couple of furlongs, but when we stopped for dinner he would be up and playing as fresh as the rest. Looking at the kind of work which the children do, I think that at from 10 years old upwards they may well work my regular hours without injury. There seems no difference between a child of 10 and one of 13 for that. But I think that they should not work a man's full day of 12 hours till they are 15 or 16.

There is one other gang here, and worked in much the same way as mine. Nearly all the villages in the neighbourhood, unless very small, have gangs, either of the farmers' getting up, or under a man like me, and their work is much the same as here. There is hardly a gang for 8 or 10 miles round but what I know. Several farmers employ gangs of their own, consisting of women, girls, and boys.

There was some talk about this matter last summer, and I have understood that they are going to try to stop gangs. Some had glent (gleaned?) something about it from the papers, and women came several times to me, asking what they should do if the gangs were stopped. It would be very serious to them, *e.g.*, one family, which had a girl of 17 and three boys younger in my gang, got from it 11*s.* 6*d.* a week full money, or, on the average, taking in lost time, 9*s.* or 10*s.* I said, "That time come, that time care."

I know that some from my gang go to evening school, for I hear them talk of it in the field, and my own boys go with them. I allow them to talk at work, unless they get too noisy, but I should not allow any bad language.

3. *Georgiana Rowan.* Age 16.—Work in Mr. Parkins' gang. That's he coming back in the cart there. I am the only girl in the gang now, and there are about 15 boys. We topped and tailed this morning for one farmer, and forked docks this afternoon for another. We left the ground this afternoon at 5, and are just got back (5.20 p.m.) To-morrow morning we shall start at 7. Take dinner with me to work, bread, or bread with cheese or butter, but take no drink at this time of the year (autumn). Paid 1*s.* for my fork, and grandmother lends me this hook (for topping); so it's the same as my own. Don't know which is the easiest or the hardest work. We're used to it now, and don't mind it. Cannot write well; that's what I want to learn.

4. *Benjamin Etheridge.* Age 12.—In the same gang. In harvest all of us went to help at it. Sometimes we have gone as much as four miles to work. Never was at school in the weektime since I went to work in the gang. Cannot say how long that is; it's a long time.

5. *Susan Adcock Reeve.*—Two of my boys worked in a gang (not Parkins') here lately. They went at about 7 years old. I cannot say whether they were turned 7; one is now 10, the other 12. They had to be on the ground at 8 a.m. and came back about 6 p.m., having an hour for dinner in the middle. That is a double journey. Sometimes they worked only a single journey, *i.e.*, working straight on till 3 or so without dinner time. Sometimes the gang begins work at 6 a.m. Then they stop for breakfast, and each gets 1*d.* a day more. Occasionally too if an hour has been missed one day they work an hour over the next to make it up. From 6 a.m. till 7 p.m. is the longest day that I have known, except in harvest, when the children work as long as the men do, but that is not in gangs. The furthest distance that they have gone to work is I think to Narborough, three or four miles; but it would not be often that they would have to go so far, only one or two days now and then. When they were quite little they went the same as the others. They would be a little tired, but not to hurt. I think beginning early teaches boys to like work. We have always kept ours out very young.

My eldest girl went in the gang a little while, but I do not like it for girls. That is because of the language which they hear; but I have not noticed any bad language in my boys at home. Some people are obliged to let their girls go because they have only girls. Of my nine children six have been boys. I never heard my children make any complaint of their treatment; they want some one that is kind to them, poor things! The work did not hurt them. They have good health.

These two boys left the gang for keeping. One now keeps bullocks and the other sheep. They go out at 5.30 a.m., and as they have little things to do after keeping they are not often back till dark, or towards 6 p.m. The youngest gets 6*d.* a day, the eldest only 5*d.*, but it's constant. There's Sunday and all too; they are out just the same then, so they can't get to church or school; I wish they could.

My boys used to go to school in the evening after work, but if they were very late they could not. A neighbour comes in now in the evening to teach them a bit, reading, spelling, and writing.

6. *Mary Lyon.*—Several of my children have worked in a gang here, and one, a boy 10 years old, does so still. He first went when he was about 8 years old, but most of the others when they were about 7. I am sure one girl was not more; but my girls were out but very little while. I don't like gangs, not for girls, and my husband did not seem to wish it if we could help it. It is not fit for them; girls don't ought to go with boys. I should like to get mine a little place out at service. My little girl now can't bear a gang; she would rather do anything. I should like her to go to school, but want her to help me at home. I have 8 children, one a baby, and have had 10. The boys generally start from home in the morning now (October) at about 7.15. They generally look to be down at the man's (gangmaster's) house by 7.30, so as to begin work at 8. In summer sometimes they have to be on the ground by 6 a.m., but they do not work after 6 p.m. They go a long way sometimes, and just the same when they begin as when they are older. Sometimes instead of stopping for dinner they work on till 3, making only one journey. This is most in winter. I believe that they like to stop for dinner best. It is a long time also for them to go without victuals; children aren't like grown-up people.

When this boy went he had to come home the first day because his head ached. It is very tiresome work stooping, and it was very hot; but in general I have had no trouble with their health.

One of my boys left the gang at 8 years old to keep crows at 2*s.* 6*d.* a week; that is the first job. He had to be out Sundays and all, all day. Then they get to pigs, bullocks, &c.

7. *Smith Lusher.*—I was brought up here, and worked in a gang 30 years ago. The numbers at work and their hours, &c., are about the same average now as then, but the pay then was only 4*d.* each a day. I believe that almost all the farmers here employ the gangs. Two of my boys, one nearly 12, the other going 9, work in the gangs now. The youngest has been out about a year. I have had three girls also in the gang. My children have gone at about 8 or 9 years of age, and have worked in both the gangs. It is not often that work is nearer than a mile; sometimes it is up to three or four miles. All are taken if they are wanted, the younger as well as the elder. They take their dinner with them. To-day (October 20) they are pulling turnips. I think that is the hardest work. In the winter, when snow is on the ground, they would not take the lessest, they could not work hard enough to keep themselves warm; but a few of the biggest may have work.

My children go to school on Sundays, and I teach them a little of a night. I do not know if they would take them at the school if they were off work for a few days now and then, or if they would have to pay.

8. At the last Norfolk Quarter Sessions held at Swaffham it was ordered, on the motion of the Chairman, that the following portion of the below mentioned Report should be printed and circulated amongst the magistrates of the county, by one of whom a copy was forwarded to me.

9. *Extract from the annual Report of the Chaplain of Swaffham Prison*, 1866.

Before closing my report I would claim the indulgence of two Court to two main causes of crime; the one (*i.e.*, the first) difficult to deal with,—not so much the other.

Drunkenness is the first. * * * * *

Over the second, the *mixed gang system*, some useful supervision might be exercised. Although not in Swaffham itself,—where two gangs only exist, one consisting solely of boys,—there are in this immediate neighbourhood as many as six in one parish.

I pass over the circumstances of drawing children so early from school,—of the distances they have to walk and do their work,—of the backbreakers,* who, though more equal to the journey, are often conveyed.

I pass by these things to the bad effect which these mixed gangs have upon the moral tone of the female sex especially.

Last August a venerable gangmaster from the Fen district, of the age of 71, was convicted of an assault on a girl in his own gang, sentenced to two months' hard labour, and to pay a fine or be further imprisoned for one month. This old man described the language and conduct of both boys and girls as something frightful; and if anything, he said, the girls were worse than the boys;—that it was impossible to keep them in anything like order without a stick. And so it may be when there is no regard paid to the character of the self-elected gangmaster. If there must be girls working on the land—at best a questionable occupation, unfitting them for home duties in after life, burdening our Union poor-houses with illegitimate offspring and young and wretched mothers—we should have proper persons to look after them. If a gangmaster had the licence of the magistrates, renewable every year (provided no objection was taken by the clergyman, the churchwardens, or other respectable inhabitants of his parish,) as in the case of beer-house keepers, different men might be found to fill the post, or men over whom some supervision might be exercised.

Should the Court entertain the same view of the

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* *Backbreakers*, a term applied to older children of either sex who by their endurance can keep others longer and sharper at work.—(B. H.)

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cause of crime, I can only hope that the learned chairman and others will take such steps as may seem expedient for urging upon the legislature the importance of an alteration in the present objectionable system.

I remain, gentlemen,
Your faithful and obedient servant,
Bircham Houchen, Chaplain,
Swaffham House of Correction.

10. *Letter from the Rev. Bircham Houchen in reply to inquiries from me on the above.*

Swaffham, Norfolk,
3rd November 1866.

My Dear Sir,

My information (see note to the above Report.—J. E. W.) is derived from the backbreakers and the "backbroken."

The system is this; the *strongest* and craftiest of the crew are induced by *some* means,—either of a pecuniary nature or, as I say in my report, by being conveyed to and fro long distances,—to keep the younger and weaker *up to the mark.*

The employer is thus—in point of time—benefited, and I apprehend the gangmaster does not *lose* by the transaction.

If gangmasters were under some local control I feel sure there would be fewer of them and the gangs better conducted; but the mixture of females is the great *bane;* the poor themselves say that if they desire the *ruin* of their children they have only to send them to *work in the gang.*

This, to my mind, is a cogent reason for abolishing them as they *now* exist in this country.

Yours sincerely,
J. E. White, Esq. Bircham Houchen.

11. As of four copies of the above report forwarded to me one was from Mr. J. Hudson, a large employer at Castleacre, and I also received, apparently from the same gentleman, a copy of a letter addressed by him in reply thereto to the editor of the "Norwich Mercury," I think it right to give (*see* below), an extract from that letter, especially as I have not received from Mr. J. Hudson any further communication on the subject. I informed him that I should be happy to receive any, and to bring it to your notice.

12. *Letter from Mr. J. Hudson.*

(Assumes the report to refer to Castleacre, "as it "has the greatest number of inhabitants in the dis-"trict," J. E. W.) As I am rather a large employer of young women and girls, as well as my son (Mr. T. M. Hudson, No. 24.—J. E. W.) and Mr. Abbott, I should like to ask the rev. gentleman what he would do with these industrious young people if he deprives them of their daily earnings, amounting to upwards of 700*l.* a year amongst our three companies? (The total given is 742*l.* 4*s.* 1½*d.*—J. E. W.)

I have made inquiry of them whether they know what the term of "backbreakers" means, and they tell me they do not know of such a class.

I should also like to ask Mr. Houchen how many of these girls he has had under his charge since he has been chaplain to the Bridewell? I do not believe there have been so many as three during the last ten years who have been convicted of crime or misdemeanor, nor do I know of a single case. Would he banish these young women and girls to the cities and towns, there to become *worse than bad?* * *

I have much more to say on this *subject,* but which I must leave for another communication.

I am, &c.
John Hudson.
Castleacre Lodge, Brandon, Nov. 7th 1866.

13. *Letter to me from Rev. Charles J. Lucas.*

Burgh House, Norwich,
January 24th, 1866.

Sir,

Having been requested by Captain Haggard to give you my opinion concerning the gang system, I write to say that I consider it extremely injurious to all those composing the gangs for the following reasons.

The younger boys and girls are often compelled to walk long distances, and to work far beyond their strength at a very early age, many of them beginning when only 6 years old, and they are by the system to a great extent removed from the proper care of their parents.

If, however, the evils connected with the system as far as regards the younger girls are very great, those the elder girls are exposed to are still greater.

As by the way in which the work is carried on and the payments made they are not only removed from home influences, but having to devote themselves almost entirely to field work, they become unfit for household duties, and often acquire habits most injurious to themselves.

I was glad to find on speaking about the subject to several large landowners and occupiers on whose lands the system still prevails, that they were desirous that the system should be done away with, on the ground that it would confer a very great benefit on those persons who are at the present time compelled to work under it.

I remain, &c.
Chas. J. Lucas,
Lay Rector of Sporle.

14. *Thomas Chilvers,* gangmaster, Sporle.—I took to keeping a gang when I lost my arm by an accident 15 years ago. I only get 2*d.* a day more than a labourer, *i.e.,* 1*s.* 10*d.* instead of 1*s.* 8*d.,* because I am a cripple, but I am very glad to be able to pick up a living so. My full number in early summer is 25, women, girls, and boys; through the winter I may have to make shift with a dozen; topping and tailing turnips will be the general job. The youngest now are from 10 to 12 years old; in summer I have some younger, down to 7 or 8 years. I don't care myself to have children under 10; they can't fadge the same as others, and look about more, and are more trouble, but parents send them. Looking after the children is fatiguing work, more for the mind than the body, but at the end of a day I am sometimes more tired than I should be by work.

They meet me in the village at 7.30 a.m., seldom earlier; sometimes we make an hour or two more in the evening, so as to make up five quarters, if time has been lost on another day from wet weather. I go on farms in the parish, none of the land further than a mile and a half, some quite close; on the average about half a mile. The younger ones must keep up with the others in their work, but they take less width, *e.g.,* perhaps three take the work of two. Pulling mangolds is very hard; the younger do that because they cannot handle the roots to top and tail so well as the elder. An average mangold weighs perhaps 10 lbs. or 12 lbs., and a turnip 7 lbs. on 8 lbs. Some are a good deal heavier, *e.g.,* up to 20 lbs. or 14 lbs.

Girls are quicker than boys, and as a rule more manageable, though not always. I don't encourage the children in idle talk, and am obliged to lay the stick on when they are troublesome. If the parents upset about it I should have to discharge the children. Parents generally like their children to come to me, I think.

At "taking" work I sometimes make a shilling or two more than by the day, and sometimes am a loser. I like taking work best, because if it rains you can do as you please without interfering with the master's time, as you would by stopping a bit if it was day work.

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I book every day the number of the hands and the prices for the master to see.

15. *Elizabeth Dickson*.—What I say is, these gangs should not be as they are. There are so many girls that they make lads at a loose hand, *i.e.*, leave them nothing to do. Then there is the girls coming home at dark; that is when the job is done. The gangs are drafted off, two (*i.e.*, workers) here, three there, and so on, so that the gangmaster cannot look after them, and is not to blame. I have gone with 20 in a morning, and seen only two perhaps come home with the man at night. Then girls will have bad language amongst themselves, though the man might wish to stop it, but there are so many together, 20 or 30 perhaps, that he can't keep them quiet. But in one gang (private) the man had the best rule, viz., that there should be no blackguarding, &c., or else he would pay them off. I have worked in gangs many years.

Sometimes the poor children are very ill used by the gangmaster. One has used them horribly, kicking them, hitting them with fork handles, hurdle sticks, &c., and even knocking them down. These are not things to hit a child with. My own children have been dropped into across the loins and dropped right down, and if they don't know how to get up he has kicked them. I have many a time seen my own and other children knocked about by him in this way. It was not from drink, he was quite sober; but only because he was a masterless man. It is if the children play and don't mind their work, or are a little troublesome anyways, or he has set them more than they can do. You see their little spirits get so high, and they will talk to the last, and that is aggravation. Sometimes too they cannot work properly because their hands are cut all across and blistered where they twist the stalk round to pull up the root. Of course he don't knock the big ones, it is the little ones he takes advantage of. I have heard him use to a child most awful words for a girl to hear.

My boy, when about 10 or 11, had a white swelling on his knee and lay suffering nearly six years before he had his leg and thigh taken off, all but about as long as a finger. He came back one day and said he had a thorn, but others told me about the man kicking him. He was a very quiet boy, and was for peace. The doctor said it was from ill-usage, a fall or kick; there was no thorn.

My children were obliged to go to work very young, some before they were 7 years old. If you have nothing except what comes out of your fingers' end, as they say, it's no use, you must let them; they want more victuals.

My husband left me a widow with 11 children living, out of 15; nine of them being then under 16 years old, and three under 3 years, two being twins. The parish allowed me 3*s*. 4*d*. in money and goods (bread) according to the number of children, but not widow's pay. My Henry wasn't 8 years old, and when I asked, "What, will you turn him out?" they said, "Well, he's big enough, he must help as "well as others."

Jemima was not more than two months, I think, over 6 years old when she went out. She said, "Mother, I want some boots to go to school," so I sent her out and saved up what she earned till it was enough to get them. She was a corpse from going in the turnips. She came home from work one day, when about 10½ years old, with dizziness and her bones aching, and died and was buried and all in little better than a fortnight. The doctor said it was a violent cold stuck in her bones. Children stooping down get as wet at top as below. They get wet from the rain too. Perhaps they may have go out three or four times in a week and not earn 2*d*., not having made a quarter (of a day), and come home so soaked that the wet will run out of their things. I have often been obliged to take my flannel petticoat off and roll it round a girl's legs and iron it with a warming pan to take off the pain and misery of the bones and let her get to sleep.

One now living with me suffers very much in this way, and her legs swell below the knee and over the ankle, especially after a hard day's work. She says then her feet feel as if they were wrung, and if she takes her boots off she can't get them on again. The doctor said it was done when she was young from getting her feet wet so. I have suffered very much from rheumatism, but that was partly from doing washing at night, and then turning out with the gang by day; but I always considered a penny of my own better than 1,000*l*. to ask a gentleman.

When the gang goes far it tires the children much more, and takes the shoes off their feet quicker, and they have to carry tools and extra victuals for the longer time, but have no more pay. Some of mine have gone four, five, six, and seven miles off, and have gone from me at 6.30 a.m. regular for a good time, and have not been home till 7 or 8 at night, or even later. Little ones at 6*d*., 5*d*. and 4*d*. a day have to go too; not but what the little ones have all the same steps to set as the great, and all the same yards and miles to go. Some of them have come back so tired that they have set down and washed their fleshes and gone to bed without supper many a time because they could not eat. Others are not so much tired, because they are so different in strength.

But they must all keep up to their work the same. There is one that is a "head" or has to lead, and has 1*d*. or 2*d*. extra to drag the others along. One who used to do this in one gang pulled down last year, and can't go any faster than the others now.

Some of the work is very hard, as pulling turnips and mangolds, muck shaking, and when turnips are being put into the ground putting muck as fast as the plough goes along,—work which women and girls have sometimes to do. Drawing mangolds is the hardest; globe mangolds are fit to pull your inside out, and you often have to kick them up. I have pulled till my hands have been that swelled that you can't see the knuckles on them. I have come home so exhausted that I have sat down and cried; it would be an hour before I could pull my things off; and I have been obliged to have the table moved up to me because I could not move to it. When I have found the door locked I have lain down outside till the key came. At singling, the little ones cry out about their backs, and stand with their hands behind, so, saying "Oh, I must rest."

16. *Sarah Ann Bullard*.—Four of my children have worked in a gang, public or private. Caroline, the eldest, now 14, went when she was just about 8; Edward, when not at all above 7; Maria, when between 7 and 8; and William now (November) under 8, went last summer for a time. Maria, now 9, when going to work with her gang, chiefly boys and girls, in other parishes, has had to start sometimes a very little past 6 a.m., to reach the ground by 8, and not been back till nearer 7 p.m. than 6. After working far off she is very tired, and does not play about the same as when working nearer. The feet and legs get tired most, which is from the walking, I should say. She does not get more than the 4*d*. for going a long distance. She is not so over strong.

Her poor little hands have been so sore at night, from pulling turnips and mangolds with them, that I have had to doctor them; the backs were cracked open from the wind and wet in the morning, and blisters inside. Now she pulls with a crome (tool). She gets quite wet through sometimes, and has very little to change, and I have to strip her and dry one skirt at a time. Sometimes in summer a gang has to be on the ground at 6 a.m., and this year my eldest girl has gone away at 5 a.m. for this.

Day work is better than taking work, because they have not to work so hard; but the pay is the same. One gang (private) is mostly day work.

The two girls can read. The boy (eldest) has not had time, and can only spell. He is in a farmyard, and seldom has a Sunday.

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17. *Catherine Etheridge.*—My girl Emily was very little more than 7 when she first went out in a gang in summer, quicking and that, and not above 8 when she went regular. I cannot say what gangmaster she first went with, there have been so many. There is a great difference in them. She is in a gang still. To-day three or four were taken from their work in the gang out of doors, and sent to work in the barn at the dressing (corn), and so did not get back till nearly 6 p.m. (on 15 November). Sometimes they are at dressing all day. She is now 16, and gets to woman's state, viz., 8*d.* a day. I should like to get her a place in service; it is more to their credit. She had a place a few months, and was to have 30*s.* a year, but she had to go out haymaking, and thought she might as well be in the field altogether. In the gang they get colds from the wet, and have to be kept in good shoes. I could not buy such as are wanted under, say, close to half-a-sovereign; but my husband, a labourer at 10*s.* a week, is a careful man, and buys stuff and makes them himself. My other children have worked but little in gangs. (The names and ages of Nos. 21 and 22 correspond with her description of two.—J. E. W.)

[Another woman who had worked in the fields for many years, in gangs and otherwise, had let only one of her four daughters work in a gang at all, and that one never by herself, *i.e.*, without the mother there to "guide her, and see that it is all right." The husband, owing to a hurt, earned 1*s.* a week less than other labourers. But all these girls could read. Three are at service.]

18. *Smith Gage.*—Two of my girls work in a gang, and two elder did; one went at about 10 years old. It was our wish to get them out of the fields as soon as we could, because it would be better for them, and more credit. But I assure you I have known the time when we could not get enough bread to eat to satisfy us. I have nine children now, and get 10*s.* if at work all the week; but have not had more than one or two full weeks since Michaelmas (now 15th November). One girl left the gang at about 15, and went to service; she had 30*s.* for her first year, and we had to clothe her.

Once or twice when my girls went a very long distance with the gang they rode part of the way in the gangman's cart; he shifting the children three or four at a time.

If a gangman was very strict and discharged those who behaved badly they would go to others; if all were strict it might do.

One of my boys went into a gang when 9; but now tends cattle in a yard. He leaves home at 5 a.m., and gets back at 7 or 7.30 p.m.; Sundays and working days. He has never had one Sunday from morning to night to himself for two years. His hours were not altogether so long at first. He is 15, and gets 3*s.* 6*d.* a week.

19. *William Bullard.* Age 8.—Was 8 in July. In the summer I worked in the gang for two or three weeks, pulling peas and suckling. In the spring before I worked at picking quicks. There were only four of us at this, me and Tom Green, (No. 20), and M. A. G., and M. B., (two girls about 10 years old), and Mrs. Fox, a driving of us. When we pulled peas (which was explained to me to have been needful, the peas having been too short to mow, J. E. W.) there were more than 30 altogether, women, girls, and boys, and the men too. Mr. B. was driving us one day and Mr. G. another. The master 'thacked' me one day because I was behind. The others went too quick; the other boys were bigger. He hit me three times that day. Worked from 8 till 12 and from 1 till 5, but when we were pulling peas, *i.e.* a week, till 6. The furthest we went to was to ——— (said to be about two miles, J. E. W.) Next week (October) I am going to keep crows.

20. *Thomas Green.* Age 9.—Worked the same as William Bullard at picking quick. Also for three weeks went to keep ducks, who were picking up barley off the piece (*i.e.*, that left after the crop was carried, J. E. W.); went from 7 till 5 and had 1*s.* 6*d.* a week.

21. *William Etheridge.* Age 10.—Worked in the gang last winter, pulling turnips with a "crome," *i.e.* two tines; it tired me because they went so quick. I had a drill to myself, and my brother, who is bigger, one to himself. The women topped and tailed. Stone gathering is easier than turnip pulling. Have weeded wheat, some in the ear, and barley that covered me, but not when it was wet. Have been to Swaffham to work, two or three miles. Only saw the man hit William Bullard once; he could have kept up to his work, and the boys kept helping on him up, but he wouldn't come up.

22. *Elizabeth Etheridge.* Age 8. (Sister to above.)—Was 8 in summer, when the tea party is, (*i.e.*, June or July, J. E. W.) Went to work in the gang in May. Worked with boys, girls, and women. Had to be at the gangman's house at 7·25 a.m. and left home at 7. (She lives, however, I was told, quite close. J. E. W.) When we were pulling suckling (a grass) we worked all the week till 6, and had 1*d.* a day more; at other work till 5, and had 4*d.* a day. Was away at work altogether about six weeks. Can read and write.

23. *Miss Read,* mistress of the Sporle school.—Children begin to leave the school for gang work at about 8 or 9 years old, girls as much as boys, and chiefly in the spring and early summer, up to about 9 or 10 years old. They come back again when their work is over, as these (Nos. 19–22) have done; but when they are older and can get full gang employment they very seldom come back in any intervals of work. I think, however, that the gangs have interfered less of late than formerly with the school, which I suppose is because parents are more anxious to get education. The school is an endowed school, not under Government inspection. Children of all ages pay 1*d.* each a week, or sometimes three of a family only 2*d.* There is a night school, to which some of the elder, who work in gangs, I believe come. Most children come to Sunday school. There are, I am told, four, if not five gangs here, and, I believe, 900 or more inhabitants.

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24. *Mr. Thomas Moore Hudson,* Castleacre.—In my opinion gangs, or, as I call them, and as they ought to be called, "companies," of women and children engaged in field work cannot be dispensed with. Those in this parish consist almost entirely of females. The work done by them is of great importance, both to the poor for the support of their families, and to the land. There are no manufactories here, and consequently a poor man with barely sufficient earnings for himself and wife could not possibly maintain a family of four or five grown-up daughters, and the work performed by the women and girls could not, or at any rate would not in fact, ever be done by men. I do not see any other way in which this work, *e.g.*, weeding, &c. could be done. There may be parts of the country in which gangs are unknown, but even there, if women and children could be got together in the same way, the farmers, I have no doubt, would be glad of it, and would employ them; in fact, this very remark was made to me by a friend the other day when the subject of gangs was being spoken of. He said that he only wished that there was a gang in his parish, as he had work which needed doing, and without which his land would remain in an inferior, *i.e.*, foul, condition, and yet without a gang he had no means of getting it done.

No doubt it is much better for children to work in private companies, doing regular day work, than under a public gangmaster. When he takes work by the piece there is a chance that he will enforce more work from them. A gangmaster is paid sometimes by the piece, sometimes by the day, and sometimes, I believe, receives 1*d.* for each child employed. My father, Mr. J. Hudson, and I keep a company permanently employed under one of our own men solely on our own farms, they being of great extent, and including together upwards of 1,800 acres.

25. *Letter from the Rev. M. S. Jackson to P. Selby, Esq., Secretary.*

Wickham Market,
July 11, 1865.

My Dear Sir,

In reply to yours of the 8th, I shall be very happy to give you any information which I possess with reference to agricultural gangs, though this is very limited.

I was curate of Castleacre in Norfolk for two years, 1863 and 1864, and I have always understood that the gang system, as far as relates to agricultural labour, sprung up first in that parish. If this is so, it tells badly for the moral effects of the system. The parish is usually regarded as the one blot in the diocese of Norwich, and I have no hesitation in saying that it exceeds anything of which I have any experience in the moral degradation of its poor. I have been to Sierra Leone, but I have seen shameless wickedness in Castleacre such as I never witnessed in Africa. This state is not wholly attributable to the gang system, but I believe very largely.

The effects of the system were seen in our schools in this way, that we had hardly any children who attended over the age of 8 or 10 years; when they reached about this age they were taken away to work in the gangs.

On our congregation the system showed itself in the fact that hardly any young persons of either sex between the ages of 12 and 14, or 25 and 30, attended church, and I should think that fully 95 per cent. of those who worked in gangs never went to any place of worship; the fact being that the system so brutalized and demoralized the character of those so employed that they had no taste for a place of worship. They needed to be civilized before they could be christianized.

On the general morals of the parish I have frequently observed whilst there that it was next to impossible to visit a cottage where there happened to be one or two grown-up daughters without finding one or more illegitimate children. The young women were utterly shameless; all female delicacy of character utterly gone. I have sometimes when taking my walks had the misfortune to have a gang of 12 or 20 young women following at my heels, and the obscenity of their conversation and the lewdness of the songs they sang were such as needed to be heard in order to be believed. Much of this, I believe, was owing to the gang system. Whatever may be done to improve it, it is essentially degrading and demoralizing.

The farmers, of course, approved of it, and from obvious reasons.

In Castleacre the gangs are not now mixed; they used to be in former years, and then the results were much worse than they are now. Whilst the gangs are actually at work in the fields they are professedly overlooked by a gangmaster, but much of the evil results from going to and fro, and it is a common thing in Castleacre for the gangs to walk five or six miles to work. My experience of the system, as I said, is very limited. It is unknown in this part of Suffolk. The vicar of Castleacre, the Rev. J. H. Bloom, who has been there more than 20 years, will, I doubt not, give you very full information on the subject. A parliamentary commission was appointed some years ago to investigate the system, and a copy of the result of that commission Mr. Bloom has in his possession.

I shall be glad if what I have written proves of any use to you, and I wish you every success in your attempt thoroughly to reform a bad system, and which, as now carried on, I regard as utterly injurious.

Believe me, my dear sir,
Yours truly,
M. S. Jackson.

26. *Rachel Clackson Gibson*, Castleacre.—I can't speak up for any gangs; they ought all to be done away with. My children shan't go to one if I can help it, *i.e.*, as long as I and their father are alive, I hope, if we can keep them; one is 7, one 5. I believe that I am the same as many other people about this. There are a great many mothers who send their children into gangs who would not if they could help it, and they say so. Nothing comes amiss to children after they have been in them, no bad talk nor anything else. I know that a child if brought up in a gang is quite different from what it would have been if brought up otherwise; you would soon know that it had been out, especially if you were to talk to it.

Gangs might be very well for boys, but never for girls. I did not go myself till I was 17 and could take care of myself. The coming home is the worst part, that's when the mischief is done, but this is hardly the master's fault. When they are hard at work they can't have bad language so much; but some will talk to set the others laughing, and the master can't be looking after all at once, and perhaps he believes that all is going right. There never was any good got out of gangs, neither in talk nor in the other way, and they never will be kept as they should. One man can never look after such a lot. I know that there is a great deal of badness done in the fields. As for the talk, you can't stand at your door but what you would have to shut your ears for it.

I don't think it proper that womenkind should go into the fields at all, in gangs or not, though I have done both. There would then be more in the houses to mind them. Harvest work is different; you are not under a gangmaster, except that sometimes the tying has been done by a gang; and at harvest much more money can be made; a woman may make 2*s.* 3*d.* in a day, and that comes nice to any one.

But other work is different. I should just have liked you to have met that gang coming back this afternoon, with their great thick boots, and buskins on their legs, and petticoats pinned up; you might see the knees of some. A girl whom I took in to live, because she has no home to go to, came back to-day from the gang all dripping wet from the turnips. If you don't feel any hurt from the wet when you are young, you do afterwards, when you are old and the rheumatism comes on. Girls wear a pair of buskins to keep them from the wet. It is hard work when you have to wring the tops of turnips and mangolds up, and often makes blisters on the hands.

Many children can't do their work properly, and often get tired, and often, too, have to work half an hour or an hour beyond the regular time. If it comes wet and they leave off before they have worked two hours they get nothing. They're all prices; the little ones, say, 4*d.*, 5*d.*, &c. Gangs will go four or five miles, and one place, I reckon, is six. The poor children get nothing but a bit of bread for dinner, with an onion sometimes. I should think none went to gangs younger than 8; that would be reckoned very small. Little children that go to work in the fields at 10 years old—what good can they do at night when they come home? If they went to school then they would not be fit for it.

27. *Hannah Bloye.*—I was always used to gang work myself in another parish, and have seen enough of it. I do not like it for girls; still all girls aren't alike. There are some who go and it makes little difference to them. If they don't hear bad language at home they don't look to use so much of it when they get out. My little girl, who is 11, has worked in a gang (private), and I have had her and my boy, then under 8, at singling turnips, with a few other children who were put under me to look after. I do

not mind my girl going with S——; he is very quiet, and won't allow anything. A great many try to get work under him; he is a nice man.

My little girl was very sorry to leave school, as she had to do, for work, just as she was doing herself a little good; she could read and write nicely; I should like her to keep up school a bit; if it happens to be wet she goes. Mr. H. (employer) paid for her schooling for the last four years; I could not have put all to school myself; all the winter 4*d.* a week was paid for three children. I wish I could have kept them till they were fit for service. I have four children at home doing nothing, and a good part of last winter had seven, and I find it hard work to get them shoes. My husband is a team man, and gets 11*s.* a week.

28. *Ann Seal.*—When I was young, 30 or 40 years ago, there were no gangs; it is a very bad thing that ever they came up. Two of my grandchildren, girls, work in gangs here now, and two of my daughters did. One, the mother of these two, went out when she was just turned 8; the other wasn't quite so old. My granddaughter Ellen began this summer soon after she was 7. They do all kinds of work, and have to find their own tools, *e.g.*, fork, hoe, reap-hook, puddle for thistles, &c. Wheat hoeing is very hard work. Yesterday and the day before one was knocking muck. The eldest gets 7*d.* a day, the youngest 4*d.* They reckon to be on the ground at 8 a.m. The further they have to go the sooner they start off, commonly about 7. They think nothing of a mile. The little one has been to one place four miles off, and to another, four or five miles. I suppose Susan began at 10 years old, and has worked in four gangs here. She has had to go all six miles, that it is, several times. If they leave off at 5 they only let them have half an hour for dinner at noon instead of an hour as when they leave later. Sometimes, but only in summer, they make a quarter of a day over, *i.e.*, five quarters. They get tired, and sometimes their feet full of blisters. This summer they have had great blisters. Susan has said, "How the stubble runs into my feet." They have, too, to carry such loads of stones to fill the bucket. They make them work, and scold them and use a stick to make them, but not to injure them. I only know of one girl who was injured. The man hit her on the back, and she was laid up from it for years with sores in her back. My daughter saw it done.

At some work they can't keep dry. They come home wonderful wet, poor things, sometimes. It's ruination to girl's health, that it is. Susan is weak in the chest, and her head very bad, and she has been stopping at home for it several times. She was not delicate as a child, but became so after she got in these gangs. She got cold with wet feet and clothes, and being badly shod. The doctor says she ought not to go in field work at all. This year she should have gone to harvest to tie with her stepmother, but could not for her health. They complained how she had lost all 30*s.* by it.

I do not like gangs. They are very bad for the mind. Girls hear such shocking language. The eldest of the two can read. She picked it up at Sunday school. A gentleman paid 1*d.* a week for her to go to school, but they would not let the child go.

29. *Jane Smith.*—I have worked in gangs, and had a girl and three of my boys in them, but I don't wish to have any. We get that in our bones that we don't get out when we are old—get rheumatic. I know by my own self what I have suffered. I have stood in corn up to my waist all day and with wet feet. I have walked eight miles to work and the same back, and my daughter, who left the gang when about 17, has done the same. We look to get on to the piece at 8 a.m. Pulling turnips is very hard work; a girl of 14 or 15 is strong enough for it. I have 7 children now, and have had 12.

30. *Elizabeth Havers.*—When I was young (I am now in my 73rd year) mothers went to work in the field with their children, and children got what they earned. That was much better than gangs. Why? why girls and boys know more now than old people used to know. Elder people get talking about things that they should not, and children are quick at taking up such things, and so get let into the light of things which they ought not to. If any one were to pass by on the road he would hear what would be going forward with boys and women mixed together. The work is divided out, say so many drills to each, and then, perhaps, a little one is put near a big one to help to make it come even. Some masters won't let their people use bad language, but some don't care nothing about it, and use as bad as any themselves. The gangs go to work with the masters, and some will have them forward in the road when they leave work, especially in spring time, when they are afraid of their interfering with the game and eggs; but otherwise they let them come back as they like. I mean to say that gangs are the ruin of a great many. When I was young there were scarcely any grown-up young women unmarried; now they are all loitering about the public houses at night.

They do not work very easy in the gang; it is hard enough, I assure you. We used to say that we worked harder in the gang than we women did by ourselves before, because women are like spirited, and if one works hard another will, because they work one against another. I like to see it, and the gangmaster likes to see it, because that's his good. You would think it hard work if you saw women and girls pulling turnips, and setting them in "ringes" (rows?), perhaps six or eight drills to a ringe, which I count that a very bad thing for a woman to reach so far. I have often had my hands all blistered and running with blood with turnip pulling, and so sore that I was hardly able to touch anything. I have been so as I felt as if I could take the turnip, and knock down the old man with it as he walked behind doing nothing. A girl of 14 will have to pull turnips. I have gone six, seven, and eight miles out to work, and the same back again.

The children, poor things, are tired enough when they have to walk far. If you can't do your work, there's a cut across your back for you. A gangmaster must have a stick; he can't do without it. He could not get them along. I call it no better than negro driving or slavery, and can't think it anything better. If a person came from a foreign country he would think the same. Still poor people must work to get a living, and I cannot see how a poor man with children could do if they were not allowed to work too. Let them go to work, but let them be kept in proper order; that's what's wanted. There would be nothing wrong in working in a gang if it was kept as it should be. Children ought to go to school. They are highly favoured and privileged now in the way of schools.

Some gangmasters make a good deal of money. One man we knew to be making as much as 1*l.* in a day. We knew this from counting how much he had an acre from the farmer, how many acres he went over, and how much he paid the children.

31. *Harriet Bell.*—I have three girls at gang work, aged 15, 13, and 11. The first went out at 8 years old, the others at about 10. It agrees with their health very well, but not with their minds. All the objection that I have is, that I consider that girls hear so much that they ought not. There are so many sorts together. When there is plenty of work my master has sometimes 40 or 50, and generally 23 or 24 in his gang, women, girls, and boys. Sometimes they hear bad things, and sometimes it leads them into error. I always go out with my girls when I am able, so as to look after them a bit. When I hear how bad others are I think that mine might be the same if I did not go with them. I would sooner that they were at anything else, and it went very much against me to put them out, but as my children are all girls but one I cannot get any other work for them.

The work when it is day's work is from 8 a.m. till 5 p.m. There is one gang that works till 6, but only on one farm. When it is "taking" work, *i.e.*, when

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the gangmaster takes work of the governor (farmer), say by the acre, it is till 5.30. The reason is that the gangmaster wants a little into his pocket. When it is day work the farmer pays him half a crown a day. Heavy work, such as wheat hoeing and turnip pulling, is usually taking work. The two elder girls pull turnips; the youngest has not done so yet, but she will do it this season if she's spared, *i.e.*, during about six months after Michaelmas. It sometimes pulls up great blisters, but my hands are older than theirs. The two elder get 8*d.* a-day each, and the youngest 5*d.* and I 10*d.*; but the wages depend partly on the work, and more is paid if it is heavy.

It haven't been the case for 20 years, though it was a little before, when I first came here, that the gang goes so far from home as not to get back at night. But sometimes we have to walk five or six miles out; walking that distance and back again on the hard road is worse than being at work. It is seldom that we work close by. The shortest walk that we have usually is two or three miles.

I could not get my children to school. I have to work so hard for them, and so must keep the girls at home when not at work; besides, I should have to pay for them.

32. *Mr. Joshua Love*, surgeon, Castleacre.—I have been in practice here 30 years. Most of the children of the working class, in some cases not more than 7 or 8 years old, with large numbers of elder girls and women, all in fact who can get such employment, work in the fields, usually in gangs. As a general rule neither the kind nor the amount of labour is such as to be injurious to them, except to some who are weakly. To the strong it is beneficial; but, of course, to a child of a delicate constitution, *e.g.*, one liable to chest disease, to be out in all weathers, rain and cold must be very injurious, but even this is not so bad as being confined in factories. If the weather is very bad the gangs do not go out; but, like all outdoor workers, they are of course exposed to wet coming on, and sometimes return home drenched to the skin. The strong become seasoned and hardened. Parents with delicate children would, no doubt, in many cases keep them at home if they could, but some are obliged to scrape together anything that they can.

A child of 7 or 8 years old may, I think, properly go out to field work, provided that the amount of it is not too great. The youngest are usually set only to light kinds. Still they are kept to it, and a day of the usual length here, *i.e.*, from 8 a.m. till 5 p.m. with dinner time, is rather long for a young child. Sometimes the gangs have to go long distances to work, in some cases, I believe, as much as three or four miles. The children sometimes come back from work very tired. I know this from questioning them when I have seen them walking sluggishly and lagging behind, and by hearing it from mothers.

Some of the work, *e.g.* stone picking, is heavy, and injures some who are not strong. The stone pickers gather the stones in a sort of apron fastened over their necks or shoulders, and when it is full carry them to where they are collected. I forget how many bushels each has to gather in a day, but I know that the amount is something very large. The effect of this work is in some cases to strain and cause injury, particularly to the spine. Much of the work indeed is of a very stooping nature, the effect of which may be seen in the gait; but I do not find it otherwise injurious. Several cases of fracture of the radius or small bone of the forearm have come under my notice in work such as turnip pulling, not only to women, but even men. It is caused by the shock of giving a sharp blow with a hook in one hand, while holding, say, a heavy turnip in the other hand.

The masters have sticks, but chiefly, I think, to overawe the children. I do not think that there is any ill treatment, certainly none such as to require being brought to my notice. There was a case some years ago where an injury to the spine was ascribed to a kick in the back given by the gangmaster to a girl of scrofulous habits, who ultimately died; but that is quite an exception.

The chief objection to the work is on moral grounds. The effect in unfitting girls to look after a house and for domestic life is very bad, and that is a very important consideration now. The trousers or buskins often worn at work give them a masculine look, but on Sundays they are dressed out so that you would hardly know them. Finery is cheap. Much, too, necessarily goes on, especially in coming back from work, and where the sexes are mixed together, which is scarcely decent. The necessities of nature are an instance. Men sometimes work in a gang sooner than not work at all, *e.g.*, if from unfitness or any other cause they have been thrown out of their regular employment. Tallying was carried on largely, but is not at all now.

It not unfrequently happens that mothers who work in the fields leave their infant offspring at home in the charge of elder children, or in the custody of neighbours, by whom opiates are habitually administered to keep them quiet. The effect of opiates habitually administered to infants is injurious in many ways; and the death rate among infants, which I am of opinion is excessive in this district, though I have not the necessary data to establish that point, is no doubt in some measure attributable to the above facts.

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33. *S. K.*—I have had 14 children, and brought up 11 of them, only two of them boys, but all but three are dead. Last Whitsuntide my little girl, then 11, went in the gang for a few weeks, though I did'nt like it for girls, because they hear such bad words; but I had been so very unwell, and so I was obliged to let her go to get a bit of something on her back. My husband is in regular work, but it ain't often he's well now. She got 4½*d.* a day, but I let her leave off the gang because she didn't like it. She used to cry every morning before going, and in the evening she wanted to sit down as soon as she came in, but I always made her clean her flesh first, else she wouldn't do it.

I wish my name not to be given, because I don't want to be mixed up with these things. It always makes words, and I don't want that. This man (gangmaster) is drunken, and he would abuse me, and his children would abuse my children; I am sure they would. When I kept my girl away from him he talked at me, and said that I did it because the young ladies gave her something. He said, too, that if I didn't let her go then when he wanted her, I shouldn't get the chance of another child going if I wanted it ever; but I shan't want it. The language is such that I think girls are better with a little bit of bread at home without work in the gang; that's the truth. If we give way to our wants, we may ruin our families just to keep a going. My little girl has got a bit of bread three times a day and can lay (lie) well, and always goes to school week day and Sunday, and it would be a pity she should go to the gang. It is shameful to hear their language in the streets, scandalous. Still there are many girls who would sooner have bad talk and be in the field than be at home. I have not been in a gang myself, I can't bear it. I think that there are many mothers who dislike the gang like me. I was in service 10½ years, and my oldest child, now 16, is in service also. After all, what with the extra wear of dress and shoes, girls don't make much real gain by the work.

34. *A. K.*, age 12, daughter of above.—Did not like working in the gang because I was so tired. Singling turnips made my back ache. We worked with a short stick in one hand to rest on in this way (a stooping, limping walk). The master took three spare little girls on purpose to help the other little ones who could not keep up quick enough. The walking tired my feet. We went a long way sometimes, *e. g.*, to F., between four and five miles, and L., three and a half miles. Think that was

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the distance because I used to hear the girls say so; all said so.

> [Another woman in the same parish, which is in the south of West Norfolk, the wife of a field labourer in poor health, earning 9*s*. or 10*s*. a week, and with nine children, gave me, in the presence of her clergyman, much the same account of the gang work. "They use such filthy language. One of "our children, a little boy 10 years old, "went for a short time, but none goes now, "I would sooner suffer hunger."]

35. *Mary Ann Williams*, Saham Toney.—I do not let my girl go in the gang because I do not like it for girls. There are so many sorts in it, and they use such language. My boy went when he was 9. He had to take his chance with the others as to the distances. Sometimes when the gang was going a long way, if he was not wanted the master would say so, but if he was wanted he must go, or would get a flogging. He has been six miles and further to work. The master has a cart and sometimes would carry some little ones. The boy has come home so tired that he could scarcely stand, and we have had to send out late in the evening to look for him, as he did not come back, and found him dropped asleep in a cowshed by the way, he having fallen behind the others. He would have to go from home at different times, often at 7 a.m., and in summer sometimes at 6, and come back at all times, 3, 4, 5, 6 p.m, and later. They work longer sometimes, I believe, when they are doing "taking" work than at other times. Sometimes when the little ones are behind the bigger help them. They get flogged in the gang. My boy never complained to me himself, but others have told me that he had been hit, and I have said, "The man has been flogging you, hasn't he?" and he has said "Yes." I have looked and found bruises on him from it. It would be, as I was told, for standing up or looking about, or that. I did not like to take notice of it, for fear of making him disobedient. He left the gang when he was 15, over two years ago, and had then got 8*d*. a day. He is very small of his age.

36. *Eleanor Clark*.—I have seven children, boys and girls, but would never send any of them to the gang, though it is worse for girls than it is for boys. I would sooner send them to the workhouse almost, if the truth was known. My objection is because of the language and behaviour. I can hear it in this house in the morning when they meet, as it is close by. There are women and girls and big boys, and some of the girls are worse almost than the boys, and the big girls and women as bad as the younger. I have heard people say that if you meet them in the road it is ridiculous (*i. e.* indecent) almost, aye, worse than ridiculous; the oaths are dreadful. I keep my children at school as much as I can.

> [I was informed by the clergyman of the parish that these women could be thoroughly relied upon, and that formerly, at any rate, the circumstances of the latter and her husband were such as must have made it a great effort to them to dispense with their children's labour.]

37. *Jane Buckenham*, Great Cressingham.—One of my girls, now 14, (not Caroline) has been in a gang three years, and I have worked in one myself. The day is from 8 a.m. till 4.0 or 4.30 p.m. She gets 5½*d*. a day now and got 4*d*. at first. The gang goes two, or from that to three miles most days. One place to which it goes is, I believe, four or five miles. My girl says that she would sooner do the work than the walking. They have to walk so fast, especially if they are a little behind time. Picking stones is hard work; I done it myself, and it does make your loins ache, and a little girl's no doubt more. Sometimes you have to carry the stones so far to the heap. (An old woman pointed to the far side of an orchard across the road as a distance sometimes required.—J. E. W.) At some of the work the girl gets very wet, but she wears buskins. If a young one does not keep up with the others the master would not hit her, but only threaten to send her home, and then very likely the mother would beat her. I have half a dozen girls and one boy.

38. *Caroline Buckenham*. Age 13.—Worked in a gang a few weeks; had half an hour for dinner; the master had no watch, but guessed when it was half an hour, or asked men who were near. Liked day work better than "taking" work, because when it is "taking" work you have to work quicker. The master daren't hit us.

39. *Emma Garrod*. Age 17.—Was forced to go into a gang at 12 years old when father was laid up, and have worked in one since on and off. Most of the workers were girls and women, 22 in one gang. They work any time of the year that it is dry and they can get anything to do. Some got 4½*d*. a day, others 5*d*., and so on up to 8*d*., which was the highest. Sometimes we made a quarter of a day extra, an hour and a half, and then would get extra pay, the grown-up ones 1½*d*. The earliest that we were ever on the ground was 7 a.m. Got 1*d*. a day more at taking work than at day work, and worked harder, but not much longer. At taking work if the master saw us stopping he would tell us to make haste because we were getting more money. If little ones are working with big ones and get behind, the big have to help. Sometimes they don't like to do it, but the master would make them.

Have been with the gang to Gooderstone (said to be six miles, J. E. W.), but not more than two days together, and to C.'s down by the house, (said to be five miles, J. E. W.) but not above four times, and other distances not so long. Liked the walking home from work better than to it, but didn't play; we were too tired. Master always came back with us. Didn't play in the dinner hour either. Went on to work again as the master told us. Hadn't only bread to eat, and most of the others the same. Took water.

Pulling turnips was about our hardest work; sometimes we couldn't pull them out. It is a detriment to your spine, because you have to work hard and strain at it. Pulling them all day long pulls blisters on your hands, and pulling swedes the most. Picking stones, too, was very hard when you had to carry your lap full a long way.

Almost all of them in the gang spoke bad language, the little and big too. The master stopped it if he could, but often he didn't hear it, and you see most of them used to use it, so they didn't tell.

[A quiet, modest-mannered girl.]

40. *Captain H. S. Adlington*, Holme Hale Hall.—In giving my opinion on the following points, I speak only as a landowner and magistrate for West Norfolk, but am not myself an employer of agricultural labour.

With a view to obviate the indifferent class of men whom we now generally find as gangmasters, and to secure as suitable persons as may be for the purpose, I propose that no one be allowed to be master of a gang without being duly licensed by the magistrates in petty sessions. Landowners and employers in general would, I am certain, look with favour on any measure which tended to place the gangs on as respectable a footing as possible.

If any scheme were proposed for combining regular education with the employment of the young in agriculture, I think that the chief opposition would be made by the parents on account of the loss of their children's working time and wages, and not by the employers. I cannot see what the details of any such scheme should be. For children to work only on half days or alternate days might not be suitable for farm work. Owing to the state of the weather it

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is often of importance to employ at certain times all the available labour of the neighbourhood. To meet such cases, if any rules on this point were laid down by law, it might probably be desirable to allow employers some liberty of departing from them on pressing occasions.

41. *Rev. H. Milne*, rector of Holme Hale.—The character of the gangmaster is the point on which the influence of the employment on the young employed by him mainly depends. The great difficulty is how to secure having only proper gangmasters. I do not think that requiring from any one exercising that calling the sanction of some proper authority, say the local magistrates, would be thought hard or unfair by the working class. The farmers would be glad to improve the character of the employment. They see the evil of the present plan, and it is brought home to them by the very great difficulty that exists in consequence in this neighbourhood of obtaining female servants in any but the higher class of families. Though there is not a gang in this parish now, the children frequently go to work in gangs in adjoining parishes. It is a very demoralizing system, and tends to make the girls who are employed too often unfit to become wives and mothers. The exposure to the wet and cold in winter is often very injurious. I think that the requirement of a certain amount of education, to be combined with the working of the young in farm labour, would meet with the approval of a large number, though by no means of all, of the working class; and that the general feeling of all classes would be sufficiently in favour of such a measure to secure its being fairly worked.

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42. *Sarah Gallay*, Wimbotsham.—My two eldest girls went out to work in the gang when about 7 years old, the two next when about 8, and my eldest boy when about 7. I have one other child, a boy, too young to be at work. There were plenty in the Downham gang, where we used to be, at only 7 years old. The youngest gets 4*d.* a day. My three younger girls, aged 18, 15, and 13, now get 8*d.*, 7*d.*, and 6*d.* each. My husband, a labourer, is now away in London on the low-level works, but I wish he were not; a family like mine takes some ordering. There ought to be a law against married women at any rate working in a field. I reckoned that when I went out, and earned 1*s.*, I made a hand of (*i.e.* wasted) 1*s.* 6*d.* by things going wrong at home. I have gone out myself for 7*d.* a day while putting my eldest girl at school at 1*s.* 3*d.* a week. A fine lot there was to do on Saturday nights. I reckon that's how I got my bad leg, through standing so long at work out of doors and in. (Lies on a sofa with one leg bandaged up, J. E. W.) I count that they will never do any good with girls in the fields. I believe that many a girl is ruined by going to such hard work. This one (No. 43) turned a dress machine in a barn at the thrashing till she died away (*i.e.* fainted) and fell down. She is not so strong as some; but I fancy that they would sooner work till they drop than own that they were beaten. When the gang goes far the children get very tired; you see the big ones come dragging the little ones home, and sometimes taking them on their backs when they are overtired. In winter the poor little ones often go crying home for cold, though as a rule the youngest don't go so much then. At this time of year (end of May) you get so wet as if you would never get dry no more, particularly in the barley, which has so much blade. Plenty of times I have gone weeding barley when every end we got to we got out and wrung out our petticoats, and then in again. When it rains, if there is no shelter near, they get close together, and you see the big ones crudling (cuddling,? J. E. W.) up the little ones to keep them dry.

This man (gangmaster) here at Wimbotsham doesn't use any bad talk; that is a great thing. He is a Wesleyan. He would try to stop the rest if he could, but he might as well try to stop the wind from blowing. (The youngest girl remarks, "He wouldn't stop me." *i.e.* talking.)

This is the worst place anywhere I think for free schools. There is no work-day school of any kind for the parish, and has not been for years at least, and at the private school 3*d.* is the lowest payment for any child however young; but there are Sunday schools. My eldest daughter, now at service, can read and write, but she is the only one of my children who can read well enough to read a chapter in the Bible; the others' reading is of no account. She was always very keen, and learned partly from reading over the doors; the next teaches the A B C at Sunday school a bit.

Girls must do something, and as not half that want can get places, they must go out to field work. It cannot be that enough girls cannot be got for servants, for numbers go to look in the registers, and only one out of a lot can find a place. Some mistresses have seven or eight servants in a year; they cannot all be bad girls. This girl, now 15, had a place lately where the mistress was willing to give her 1*s.* a week, and I find the washing, but that would scarcely pay for my trouble, and I could not keep her there.

My eldest boy, now 10, is not in the gang now, but on a farm; sometimes he is crow-keeping. This last season, though the land was close here, he had to start at 4 every morning, unless some one favoured him and took a little of his work for him, and to stay till 7 in the evening, Sundays and work-days just alike. He stays away all day by himself, and takes his victuals with him, but he amuses himself somehow. He is very tired then, and will come home and almost fall down or drop asleep with the victuals in his mouth. Sometimes he lies down on the land. He gets 4*d.* a day for this work. At Michaelmas time the crow-keeping is not so long because the days are darker, but he has to start as soon as ever he can see, it may be 5.30 a.m. He must be there just the same, rain or shine, and if it is soaking wet. Sometimes people make a little hut for them with straw hurdles, but he had none; there were high hedge-rows. One night when he came home he lay up quite stiff and cold.

43. *Mary Ann Gallay.* Age 18.—There are 37 in our gang now, nearly all younger than I am, and down to 8 or 9 years old; eight of them boys. We are on the ground from 8 a.m. till 6 p.m., and in winter till about 3, stopping then only about 10 minutes for dinner. We worked the same hours at Downham; and the Stowbridge gang works, I think, the same. We do not go further than three miles. At Downham we have been to Hilgay Station, and past the "Dog and Duck." We used to reckon that 5½ miles from between the bridges, where the gang started. Some would have to come a mile to this starting place. For those distances to reach the ground by 8 a.m. we had to start at 6.30, or sometimes 6, and we did not leave till 6 p.m., getting home at 7.30 or towards 8. All went, little as well as big. I have walked home without my shoes, because we thought it tired us less. Sometimes we are wet all day up to our knees, and if there is a wind it is very cold; if there is shelter we go to it if it comes wet, but when we are in the fen we have to stand it all then; I have been laid up from cold from it. I hurt my back in carrying my apron full of turnips to fling them up; for two or three days I could not move, and they had to turn me over; when picking stones we carry them in the same way. (Spells short words; a sister, age 15, who works with her said, "I am sure I could not read."—J. E. W.)

44. *Sarah Hutton.*—Mother had 12 children, and has had six of us out in the gang at one time. When we came home very wet she has had to strip us and put us in bed while she made a fire to dry our things.

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45. *Mr. Simon Hudson*, Stow Bardolph.—I have farmed some 40 years, and now occupy towards 500 acres; owing to circumstances I had to work my way up against considerable difficulties, and take a practical part in the business. Gangs are commonly employed about here, and have been more or less for

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the last 30 years, but more of late, owing probably to improvements in the system of farming, which have been very great; tidy farmers will not be seen to grow weeds now. My own opinion, however, is that children cannot do the work, of most kinds at least, so well and effectively, and do not answer so well as older workers; they are not strong enough; if they are hoeing they are apt only to scratch over the top, and the work may have to be done over again. I had a gangmaster, with his gang of boys, girls, and a few women, to pull some peas which were short-strawed, and so could not be cut without cutting the peas themselves; I put the work out to him, but he could not earn the money properly. Children can do weeding, but there must be a man to look after them, and the master must give a good deal of time to looking after him; the only gain of having children is that they clear off a piece of work a little quicker. For my own part I generally keep a few grown up women to do the weeding, hoeing, stone-picking, and other light work; there may be a girl or two amongst them, but not more; girls want too much looking after; they should go to service, but if they have been in the fields they seldom will. Where farmers employ children it may perhaps be because they cannot get enough women. There is one gang here of from 20 to 30 women and children. They work from 8 a.m. till 5 p.m., and earn from 4*d*. to 8*d*. each.

Weeds do generally grow quicker on fen land, I have found, than on other kinds, but a great deal depends on how the land is farmed and cleaned; if care is used for some years the weeds gradually diminish, and consequently the need for weeding grows much less. Most of the land is now considerably better farmed; the fen land too is now much better drained, and therefore weeds do not grow so fast, and die better.

The artificial manures now very generally used do not introduce weeds or tend to increase the need of weeding; of course they make all things grow stronger, but especially make the crops more luxuriant, and the weeds therefore cannot get up so much.

A great many of our best labourers and boys have been leaving the neighbourhood; their only commodity is their labour, so one cannot wonder at their disposing of it to advantage. Men's wages about here are 12*s*. in summer and 11*s*. in winter; a man and two boys of, say, 12 and 14 are now earning 1*l*. The elder ploughs; with the iron ploughs now used boys can plough almost as well as men; a man can drive a pair horses himself, without a boy to lead, though in some counties where the land is wet or in bad cultivation I believe that a pair of horses is not enough for a plough.

Is the Government going to do anything for the education of the children of the poor? I have not heard it spoken of, but think that it would be desirable; very much so. Farmers in general would not object, I think, to giving up some portion of the children's time for this, if it were for the children's benefit; they would be unreasonable if they did; undoubtedly it would be beneficial to all to have a sensible and educated population. In my opinion the value of children below, say, 12 or 13, is really not great to farmers, and if only part of their labour were taken away the loss to the farmer would be very small; even half of each day would not be more than could be spared without any important loss. Regularity of school attendance could be secured if the employers would take an interest in it, but probably this could not be caculated upon enough to secure the general enforcement of any required school attendance. There might be some kind of Government inspection to secure it; if by such or any other means the children of the poor could be properly educated it would produce a better feeling between the classes.

[Mr. Hudson on returning the above, when sent to him for revision, wrote that he had shown it "to some of my neighbouring "farmers, who are employers of the gang, "and they do not think there needs any "alteration."]

46. *Letter from the Rev. E. J. Howman, a county magistrate.*

Bexwell Rectory, Downham Market,
Dear Sir, Dec. 8, 1865.

(The letter refers to the "Reports of Special "Assistant Poor Law Commissioners on the Employ- "ment of Women and Children in Agriculture, 1843," and proceeds): Now with regard to the opinions I expressed at that time. Having reperused them carefully, I do not think that I have any reason to depart from them or to modify them in relation to the effects produced ultimately on the health (p. 216), and I see at pages10 and 60 an opinion expressed by two surgeons strongly corroborative of my own. In regard to the moral part of the question, I must so far modify the opinion I have expressed at page 278 as to say that additional experience has convinced me that the gang system is not so responsible for an increase of immorality as used to be supposed, as domestic servant girls, tested by the fact of illegitimate children, are to the full as immoral, if not more so than those employed in field labour; and that if there is an excess in the latter it is ascribable to the effects of out-door labour generally, rather than to the gang system in particular; and touching that matter I adhere now entirely to the opinion I expressed then (p. 243). * *

Yours faithfully,
To J. E. White, Esq. Edwd. J. Howman.

47. *Hannah Staff*, Downham Market.—My girl, age 15, works in the gang; it is a deal more healthy than the flax factory, because you get fresh air; in the factory the dust quite choked up her chest, and she could not have stood it. She had a place in London, and I wish she could have kept it, because girls learn nothing in a field, *i.e.*, about a house, but it was so far off, and she had such hard work. My husband kept a gang here; he never kept 1*d*. of a child's money in his life, as they say a many of the gangers do; he was paid usually by the day, from 2*s*. 6*d*. to 2*s*.; sometimes the lessest farmers used to give the most.

48. *Rev. H. Hilton Hutchinson*, Rector of Welney.—The leading feature of gang employment, as carried on in this place and neighbourhood, is the indecency and immorality to which it leads. While both sexes work together, as they do now, it is hard to see how this can be prevented. The mere fact of girls and women being kept together with boys for a whole day in an open country like this, with often not the shelter of a hedge, or of any other kind, makes it impossible for simple decency to be observed. This cannot but result in a loss of natural female delicacy, which is at least some safeguard of morality. The grossest language is commonly used,—I do not mean merely the low expressions unhappily too common amongst the lower classes in any place, but language immoral and vicious in the most common and direct sense of those words. Nor can it be hoped that the immorality is confined to mere words. A big boy made open boast before the gang, and in the presence of the girl herself, who was about 14 years of age, that he had had connection with the girl; and I felt bound to call the attention of the mother to the fact, and caution her about it, and was thanked by her for doing so. I have been informed by a person on whom I can rely, that in another parish mere boys and girls from the gangs are known to pair off together for like immoral purposes. A separation of the sexes at work would at least prevent this, and be a great improvement in this and the other ways referred to.

The hindrance to education is another important result of this system of employment. When the busy season for gangs arrives,—and it is in gangs that the greater number of young children are employed here in field-work,—the number of children attending the school falls off very greatly. The number attending the school, which in winter is about 120, falls to not much more than 60, or about a half, in summer, when the gangs are in full work. The school is free, and is supported by a very fine charity, which has an income of about 800*l.* a year; one third of this being for the school and repairs of the church, &c., another third for the poor, and a third for the highways. There is no limit fixed as to the numbers who may receive a free education, and certainly the limit of the number who could receive it has not been reached.

If all children employed in field-work were required by law, as a condition of employment, to receive at the same time some regular school instruction, this would, I think, in the majority of cases, secure the object without the need of appealing to any authority to enforce it. It would give me the power to point out to parents, in the case of their children not attending school as required, that they were neglecting a plain legal duty, and not merely a moral obligation, of which perhaps they cannot be expected to see the proper force. My interest as a clergyman in the educational and moral welfare of my people would naturally lead me to do so, and I have no doubt that this would, as I have said, in most cases be sufficient. If it secured only a partial observance of the law, this would still be a great improvement on the present state of things, and decidedly worth the change.

As regards the scheme of school attendance to be adopted, it strikes me that, having regard to the nature of the employment, and the great distances at which the children are often employed, the best would be *one* requiring the attendance at school of each child on alternate days. There is no school on Saturday, and, I suppose, cannot as a rule be any, in country parishes at least, on account of the necessity of giving the master one holiday in the week. This I consider an absolute necessity, if the schoolmaster is to continue efficient. On Saturdays, besides, he is called upon for other offices, such as surveying land for farmers, &c. To distribute the number of days equally to each child, they might change their days in alternate weeks.

As regards the working of the school, there would of course be some difficulty from having children in from work attending only part of the time, and this would probably be greater than in manufacturing towns, where greater numbers of such children come in at once. Still, in time, this difficulty could be met and overcome. As it is, children are not refused admittance to our school on the ground of their coming only now and then, if they choose so to come at all.

Evening schools are not suitable for children, especially after a full day's work, and not for girls at all. With lads they may do a great deal of good, as I know from my own experience in another county, and I may perhaps start one here; but they cannot be expected to be universally, or very generally kept up. They are so laborious to their supporters, and require such constant attention from them. This falls mainly on the clergyman, as the schoolmaster cannot be called upon to give his time to it; and there is usually no other person competent to secure order and attention amongst the class of youths of which night schools are usually composed. I used to find that my personal and almost constant supervision was the only way of securing the satisfactory working of my night school.

49. *Mr. William Climenson*, Welney.—Our low land system of cultivation, a large proportion of which land is cultivated on the five course system, requires more labour than the high land system with four courses, but less regularly; consequently the employment of gangs is more necessary to us, but I would sooner have only boys in them; women I think are best at home, and girls should go to service. There are 900,000 acres of low land lying below spring tides, drained by artificial drainage, and lying north of Cambridge, *i.e.*, from Cambridge to Lincoln and bounded by the sea.

Labourers, *i.e.*, good ones, are getting scarcer every year. The best leave. Emigration is the first drain; then manufacturers come to Peterborough, Whittlesea, and all parts of the country and sweep away whole families. What they want, however, is not the men, but the women and children, but of course the men must go with them. In the Downham union, in which the parish of Welney is situated, and in which I am a guardian, there are 34 parishes, about half in the low land and half in the high. Those in the low are better to do, the men making on the average of a year, say, 1*s.* to 2*s.* a week more than the men in the high land.

50. *Rebecca Briggs*, gangmaster's wife.—My husband, Nathaniel, has now 20 boys and girls in his gang, aged from 8 to 12 or 14, most girls and a few women. They start at 20 minutes or a quarter to 7 a.m., and sometimes see the 8 o'clock train pass when they get to the ground. They leave one farmer's ground at 5.30 p.m., but others' at 6, because it is nearer. My husband is paid by the day, *e.g.*, 2*s.*, 2*s.* 3*d.*, or 2*s.* 6*d.*, not by the acre; he does not find that pay; he lost 30*s.* by a pea job. He goes three prices, according to the length of the day, and works all through the winter when there is no frost, but has fewer then, perhaps half. One farmer employs some children himself, and my man gangs them too. My girl, now turned 8, went a week or two last year. The farmers come and call the names and take the count five nights out of six. You know what that is for, to see that the gangmaster don't take more than he ought. There has been a lot of money made out of gangs, but my man never took a halfpenny.

For my part I don't care how soon ganging is put an end to. My husband is a brickmaker, and good at his trade, and he and I could work at that. I'd run till my eyes strike fire, but what I'd mean money.

51. *Rhoda Rudland.*—Three of my girls work in gangs here, two in Wilson's, one in Briggs'; they work the same hours (*see sup.*) One, now 9, has been out two years before this. They start at 7, but it is no ways certain what time they get home, as they stop on the road; I dare say it is 7. Each pays 1*d.* a week to the gangmaster. One of the farmers comes every day, if it is day work, and takes account of every hand he has; if it is taking work he doesn't care. The little ones get tired, of course. There is no riding in waggons here; they must not ask for any riding.

Most of the gangmasters carry a stick, but don't use it so much as they did, I think; children have been used roughly, but not mine, I believe. They durstn't come to us to tell us any tales.

["No, poor things, they dare not talk about it" said a neighbour.]

52. *Susannah Smart.*—Three of my children are with Wilson's gangs. The two girls are five or six miles away to-day and were yesterday; one is 14 the other 9, and the boy 11. The little ones are gone to get a little bit of clothes, else, poor little things, they are not fit to go constant. Sometimes they work so nigh they can get home to dinner. The two parts of the gang change, one works three days at a distance, and then the other for three days. My girls came back last night between 7 and 8, and had started early. They are too tired to play, but have supper and go to bed; my girl is a good one to go, no trouble for that. Sometimes she will say, poor little thing, "Why didn't you call me at five, I know I shall "be too late." They have no more pay for going a long distance, the little ones don't; I had an argument about that last night. It's a shame they should have to walk all that distance for so little. The big ones help the little ones on; that is how they have to get home. If so be that there isn't a big one to help, the men won't take the little ones, and they won't take them till they can earn 6*d.* My little girl could hardly get home last night. But it's the language that I dislike the worst.

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53. *Elizabeth Wilson*, gangmaster's wife.—My husband has had a gang several years. A farmer persuaded him to take to it, but it's very hard work for him. The "brag, brag, brag" all day is very bad for the lungs. I don't know how many he has got now, because he is no scholar, and a young woman in the town keeps the books for him and makes out the price of the bills for the farmers. He has as many as he can; if he could get two score he would have them; if only 15, that must do. They should be on the land by 7 and leave at 6, at day's work. My son-in-law ain't home now till 7.30 of a night, and starts off at 6.30 a.m., but could not be on the ground all those miles off in Upwell, till 8. When so far off, they reckon it right to leave the ground at 5.30, but without a watch they can't exactly guess the time.

People call children dunces, but it's their own fault for not paying men's work enough to support them without their children working. Some have five or six little titty children to maintain. There are many young men who can't get work though there are plenty of women and children out. My son, now 18, is at home only for this reason. He could get woman's work at 10*d.* in a gang, but he won't do that.

54. *Mr. John Barrett*, Hilgay.—I have a small farm here, about 60 acres, and have farmed 30 years. Farmers have always had women and children working for them more or less, but it has been more the custom of late to have a regular gangmaster. We have a great deal more land under cultivation here than we had 20 years ago, hundreds of acres together, so more labour is wanted. As a rule the fen part of the parish, I think, wants more weeding than the higher part, though the crops are the same; but a good deal depends on the season. A gangmaster gets together the scum of the parish, such as the regular farmers won't have. Some are good women, some very bad. If I want three or four I pick them, as others would. If they were bad I would not have them, therefore those must go with the gang. That is how it is, you see. The gangmaster gets 2*s.* 6*d.* a day, while other labourers get 1*s.* 8*d.*, or 1*s.* 10*d.*. A man takes to this, perhaps, because he is rather lazier than others; some people will sooner do anything than hard work. The gang works from 7 a.m. till 6 p.m., or in shorter days from 8 till 4 or so. Children go from 8 and some from 7 years old. They should not go till 10, but I do not think they are overpowered, or that the work hurts or strains them, because it is light; they do not go more than three miles. In most of the places about here there is a gang and the work is much the same.

I am not very fond of the gang at all. They blunder over the land and knock the corn about and do a deal of harm. Many farmers keep a few women under one of their own men, but some cannot get them when they want them, and if the land is full of weeds they are glad to get them out any how, so must have the gang. For myself I think that more men ought to be employed and fewer women, except for a little weeding and at harvest.

I don't like field work for girls; they get so bold and know too much, and there are some crafty elder women who use such language. Boys and girls together will get corrupted. I should like it much better if the boys were together and the girls together and under a woman, though I do not know if she could manage them. A gangmaster cares nothing about their conduct, nor the master either, as long as the work is done.

55. *Hannah Cox.*—I have 13 children, eight of them girls; my husband is a labourer getting 11*s.* a week, sometimes 10*s.* Several of these have worked in gangs for farmers. There are more different characters of women as well as girls in the gang that runs about (public gang) than in others. Hannah, now just 10, works in a gang, and starts at 7 a.m., and leaves off at 6 p.m., or 5.30 when far off. From where she is now (three miles off) it takes her an hour to get back. I do not like her to stay with the boys on the way, and I tell her to get back as soon as she can. She walks pretty wide, and there are smaller than she is that go with her, one a year and a half younger. It must hurt them little girls to go so far when so young. It hurts the health of children also to be amongst the wet corn, but since she has been out it has been fine.

The man has a stick; he is obliged to with these audacious boys, the master says, and it is used to the girls too if they deserve it, but if there was any ill-usage my biggest girl would, I think, have noticed it when she was with the man lately. A woman took the children last week when the man was away hoeing, but she could do nothing with them; the boys were throwing clods, &c.

Three of my boys have gone out to work at about 7 years old; the eldest was, I think, not quite 7; the next I know not turned 7; the third, now 11, I think was turned 7. They went to crow keeping. That comes for perhaps three months after Michaelmas and a few weeks in spring. Boys go to it as soon as it is light and stay till sundown; in spring they have to go at 5 a.m. and not get home till 7 p.m. or sometimes a little later, and get 3*s.* a week. They get used to it and find things to amuse themselves with. Sunday is the same as other days.

56. *Jemima Chivers*, Southery.—At this time of the year (spring) I always look to keeping my children at home from school to be ready to go in the gang. One girl works in a man's gang; a very good master. She has been to a distance of eight miles two days or so together. Little mites younger than she is go with her. It makes them right tired when they get back. I never heard of children being sent in a waggon here. For a long distance they start at about 7 a.m. and get back at about 7 p.m.; for other places they start at 7.30 a.m. and leave off at about 6, or earlier. Sarah Ann goes with her aunt, who has had a gang for several years, and keeps as many children as she can manage. Sometimes they come home quite wet through, or sometimes perhaps they may not get wet twice in a year, if they are in any place where they can get shelter.

57. *Sarah Ann Chivers*, age 10.—My aunt has about 15, all girls but three. We start at 7 a.m. and leave work at 6 p.m. I have been to J.'s farm, (said to be four miles away.—J. E. W.) We do not sit down at all on the way. Weeding is easier than walking. Don't know how much I earn; aunt pays mother (5*d.* a day). Can read.

58. *Susan Bell.*—My eldest boy, aged 8, is in a gang, and worked in one all last season too. (Hours as above.—J. E. W.) He does not go above two miles. He likes the work, and is very well and eats nice and hearty. The man is very kind, and must be or the children would go to some one else, because more are wanted than can be got. The man has about 12 children, the eldest going 9. When my boy went to him last year he was not the youngest. There is another man, who is fond of beer, and when he gets a few children the money goes there, and he owes money, so cannot get children well.

[Other parents gave like accounts; one man did "not like field work for girls, because "they hear what they should not."]

59. *Letter from Mr. F. Robinson, (late of) Southery.*

DEAR SIR, Ely, 11th October 1866.

I REGRET to tell you the Return (*i.e.*, manuscript statement sent for his revision.—J. E. W.) sent to me has been mislaid, but I well remember the views and opinions I have long since entertained upon that subject remain unaltered. You cannot, in my opinion, divide the boys from the girls. The only safeguard you can place over them is to take care that no person shall have the charge of a gang of weeders unless

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he can obtain a certificate of good character from the board of guardians, which is, I think, about the best test that can be applied. From observation I have generally found men of the worst character lead our gangs of children, which has a tendency to produce the most immoralizing effect.

In the cultivation of fen lands it is my opinion gangs of weeders could not be dispensed with. I have now done with the occupation of land from old age, you may therefore consider my opinions in this matter as unbiassed by any personal interest.

I am, &c.

J. E. White, Esq. FRED. ROBINSON.

[Mr. Robinson, when I saw him, held a farm of 800 acres at Southery, and had been engaged in farming for 50 years, and had a wide experience in land. He stated his opinion that the supply of agricultural labour, already insufficient for the area to be cultivated, must, from the low rate of wages which could be paid by farmers, become still more so.]

60. *Mr. William Chapman*, Grimston.—I am vice-chairman of the Board of this Union (Freebridge), and farm several hundred acres, part being my own. Most of the farmers round here employ gangs, and I do not see how they could do without. I know no large farm within, say, 10 miles, which does not employ them. They are more necessary for large farms than for small. Farming must be done very differently now from what it was, and much more weeding done. This light land grows more twitch than other land. From March to midsummer is the chief time for cleaning the land from twitch, and a little while in autumn. We put out what work we can to the gangmaster to be done by the piece. If it is done by the day we pay him 2*s.* 6*d.* a day for himself and so much each for the hands, *e.g.* 5*d.*, 6*d.*, or 8*d.*

If children below a certain age, say 12 or 13, had to attend a certain amount of school the effect on the supply of children would not, I think, be enough to make much difference to farmers. It would be more a matter of convenience than of cost. Little children are not much use, except for picking twitch and stones. Stone picking lasts only a short time once or twice a year. I do not see that there would be much difficulty if the school attendance was on alternate days.

The chief work for the youngest boys is crowkeeping. Sometimes an old man with a gun is employed for this, and can keep more ground so than a boy. I have been asked whether crowkeepers could not change turns on Sundays.

I think that gangs are better managed and the language better than formerly. The chief objection to gangs is that they make a difficulty in getting girls to go into service.

The present want of cottages in some parishes will, I think, be diminished by the new union rating. There is no doubt that we shall see lots of cottages springing up. This will be a great improvement, and will diminish the distances to which labour has to go now. The gangs generally go two miles out one day with another, sometimes four or five miles. The labourers round here are all well employed, and I think the general opinion is that labour will be scarce. The wages have not risen nominally of late, but they are higher in proportion to the prices than they were. Last week (in autumn) they were raised to 11*s.* * Labour is very scarce just now, and wages high, say 12*s.*, 13*s.*, and so on. Gangs are very much wanted now after the beet crop. As I have before stated, we could not very well do without the gangs with our present supply of labour.

61. *Mary Warner*, Pot Lane, Grimstone.—One of my boys went to work in a gang before he was 9 years old, the next when he was nearer 7 than 8, because we could not keep him at home so long. They used to walk a mile, all that, to Roydon to the gangmaster, and from there on to their work. That has been as far as Wooton, which is, I think, four or four and a half miles beyond Roydon, and sometimes I have known it two miles beyond that again, a long way down on to the sea marshes, to pick stones and spud thistles, and so on. Another place to which they have gone is, I should say, four miles. Sometimes if there is a nearer way back they would come by it, as they are not obliged to come back with the master. They would be very tired going such a long way, and sometimes I was sorry that they had to go, but we could not help it. If they go in the gang at all they must go to all places alike, and to any work, be it what it will. The master would send one back because he had not been the day before, and has done so. There is no extra pay for going a long distance. Some masters are so particular that they won't let you stop at all on the way to rest. I have been in a gang to work in West Newton, close up to Sandringham. That took two hours to go, and walk a good stroke. (Her husband stated that he had formerly gone in a gang to Sandringham, "right against " the Hall, and all about there."—J. E. W.)

Some of the work is very hard, *e.g.* stone picking. You hold your apron in one hand, and when it is full of stones carry them to the skip, perhaps 14 or 20 yards, the skip being moved about. The weight of the stones tires the loins very much. How much you can pick depends on how the stones lie. I have known one worker pick a load, which is 24 bushels,* in a day where the stones lay fairly thick. It's none the better for the children when they lie very thick; that's the better for the gangmaster, who generally takes his work at so much a load.

I was in a gang as a girl, but little since I was married; I have had children so quick. A gang has women, girls, and boys; but except at hard work, such as wheat hoeing and turniping, the boys are small, say not older than 13 or 14; older boys go now and then, but only by chance, because they can get nothing better to do. (Her husband stated that men were less employed in these ways than they used to be.—J. E. W.) Sometimes gangs work one journey, *i.e.*, from 8 a.m. till 3 or 4 p.m. with no stop at noon, but not all do so now, though the days are getting short, because some farmers don't like it so well as two journeys, viz., 8 a.m. till 5 p.m., with dinner hour.

Children do not go out before 7 or 8 years old, I think. My husband's sister had two boys out to work at 6 years old, but crowkeeping was their first job, I think. One of my boys, now 8, keeps crows. Sunrise to sunset is crowkeeper's time at this time of year (November).

[The boy, Alfred, said that he could not go to school on Sunday now because he had to keep crows every day. His former master when going with his gang had a cart himself, and carried their tools.]

62. *Mr. James Cobon*, Well Hall, Gayton.—For many years I was chairman of the board of guardians for this Union of Freebridge, Lynn, which comprises 32 parishes. I occupy nearly 1,000 acres in this parish, about 800 of them ploughed land, which, like most in the neighbourhood, is light and wants a great deal of weeding to keep it clean. I do all that I can with the horse hoe, but that cannot do all. It is very rarely, however, that I employ a regular gang. Most of my light work, such as quicking or weeding, is done by women who are permanently in my service. Working on regularly they can do most that is wanted, but every now and then there are occasions when it is desirable to have a greater number of hands at once to do a job quickly in suitable weather. The most

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* The remainder of this statement was added some time later.—J. E. W.

* Elsewhere stated to be 10 bushels.—J. E. W.

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pressing time is when the weeds are growing rapidly in the corn or roots, and if they are not taken out in proper time they must be left altogether, to the great injury of the crop. I prefer either all girls or all boys. For such work I have at times employed a gang, but more usually I employ one of my own steady labourers to get a dozen children or so for the purpose, and he gets the work nicely done by them. Girls seem more lively and quicker than boys. It is his interest to keep them properly to it, though he never takes it by the piece from me. He gives me an account showing how many children he had at *5d.* a day, how many at *6d.*, and so on, and this is paid by me. I much prefer to to have the children under the charge of a man of my own. I can be sure that he is steady and respectable, which is often not the case with the regular gangmaster. To insure a steady and respectable gangmaster it might be required that he should be sanctioned by a majority of, say, six of the largest employers in the parish.

I do not see any objection to gangs if properly conducted, and think that children are safer in them than running about by themselves, often in idleness. Almost the worst part of gangs is their having to go so far about, *e.g.* two, three, or even four miles sometimes. When a gangmaster takes work by the piece he gets more work done by the children, of course for his own benefit.

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63. *Mrs. Woods*, Heacham.—My husband, Morgan Woods, takes out a gang when he has work, but he can't get much to do now (November). The last time that he had any was just before harvest at singling turnips, and then he had 15 girls, but none younger than 10 or 11. He has never had more than 20. He is old and paralyzed in his side, and cannot work himself now, but he can keep them to it, and so get something to live on. We have been obliged to send our own children out too; we have had so many, 15 altogether, 9 of them still alive. I used to go too till lately, but have not been able since. Jane, there, was 7 when she first went out under another master; and my husband has had some as young as 8 and 7, but of late he has not any so young; and for the last two or three years he has had no boys, and won't, because they are so troublesome. They reckon to be on the ground at 8 a.m. and work eight hours, *i.e.*, till 5 p.m., if they stop for dinner, but in winter, when it gets dark soon, they only stop a very little just to eat a little mite, so as to make eight hours as near as possible.

The work is generally out of the parish. The nighest farm is Mr. S.'s, and that is three miles or not far short, I think. We have been to Thornham, almost by the clergyman's house. Then we've been obliged to start at 5.30 a.m., and sit down and get a bit of victuals before we began work at 8; we have gone there three and four days in a week, but the walking was so much that we could not go every day, though we have gone three days right out, *i.e.*, following. We only went there one summer; there was a different farmer came. We have all gone there, the younger as well as the others, but most were girls as big as Maria there, who is 16, and few little ones, the youngest perhaps from 11 to 13 or so. We never sit down till we get to the land, and then if it is very far we sit down to eat a bit, but sometimes we have had no time to sit down, but been obliged to begin work as soon as we were on the land. When we go a long way like that each gets *1d.* extra, *i.e.*, *9d.* a day, and so they do when they go as far as to Old Hunstanton through the Park, down by the Hall, which takes about an hour and a half, but for common distances there is no extra pay on account of the walk. All are paid alike, the youngest as much as the others, and those of the family the same as strangers; it makes no difference. The farthest that my husband could go last summer was 3 or 3½ miles, and perhaps he would have to start before the others, so as to get there in time. Turnip pulling, which goes on from now (November) till past Christmas, is terrible work for women, not much fit for them; it is very wet work at times.

Maria there can read and write; she has been out a bit, but went to school regular for five years. Sarah Ann there, now 15, can read a little, because she goes to school now; she has been very ill with her liver and cannot work; she always complained of her side when a child, and when she went out with her father at perhaps 10 years old or so she complained, and has had to sit down for it.

64. *Jane Jacob*, married daughter of above.—Mr. M., the gangmaster that I first went out with had at one time as many as 27 in his gang; they were all ages, from 7 up to married women, but there were only small boys, not over 12 years old. At about that age they look for other work. My first master used to give the small ones *6d.* a day and the bigger *8d.* Father paid all alike, *8d.* All have to do the same work, and keep up even. If one is too small to do so, even if she is only 7 or 8 years old, she gets her *8d.* all the same, but gives a penny or two of it to a bigger for helping her. Some are obliged to have two helpers. I have had *2d.* a day for helping a little one. You set the price for helping them, and if they don't like it you don't help them. We could tell what it should be, for we used to pretty nigh guess how far you had to go to meet them.

I have been along with father as far as H———, a mile beyond Old Hunstanton. (The name of this place sounded like "Harlham." The only place of at all like name and position that I can find is "Holme," J. E. W.) We have then gone off at 6 a.m., and shouldn't be on the ground before 8, because it is such a long way, and it would be just the same back. We have left off at 5, and not got back before 7. We got *1d.* a day more for this distance, but father would not get a penny more. He taken it at so much an acre. That is the usual way at such work as singling, pulling, topping, and tailing turnips, wheat hoeing, &c. Quicking, stone picking, and weeding barley and wheat after they are up is done by the day. Whether the work is by the day or the piece your hours and pay are the same. I have not had a chance of going out for about the last four years, since I have married and had children.

Most of the work is very stooping, but some is harder than others. Wheat hoeing and turnip pulling are very hard. Turnip pulling blisters your hands and makes them raw. It is the frosty weather and rime that hurts them. You're pulling the tops and they're all full of ice and that, and you are obliged to go at the same hour in the morning. My hands were never so that I had to give up work for them, because we had finished, but I could not have gone on. My hands were quite raw. That was about five years ago, when I was 19. A girl must be 16 or so before she is strong enough to pull turnips, because it is quite hard work for the arms and hands.

I was never at school, except on Sunday, and can neither read nor write.

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65. *Charles Mason*, Docking.—I have two girls, one aged 14, the other 11, working in a gang under a woman. I don't like it, I wish that they could do something else. There are all sorts in a gang, and girls learn there what they never forget. They generally go to the same farm, about 2½ miles off on the average, but sometimes to another. They work from 8 till 5, with dinner, or now (November) till 3.30 with only a little stop for dinner. They come home very tired. Pulling mangolds and turnips is very hard work. I think of taking the youngest off this winter. Her work gives her an ache and pain; she is growing fast, and is tall. The eldest is just 'heined' (heightened) to *5d.* a day, the other gets *4d.* The gangmistress I suppose gets *1d.* or *2d.* a day out of each, but we can never tell about that. They do not start out if it is wet; but they have gone out, and had it come on wet as soon as they got to the place, and been dangling about all day on the chance of its being fine, yet got nothing. They do not get paid unless they work some time. Both can read, the eldest best.

66. *Susan Sadler.*—Two of my girls, one aged 16, the other 14, work in gangs under mistresses, and began between 10 and 12 years old. There are no boys in either gang. One works two journeys a day now, the other one. I always liked two journeys best myself, so as to get a little bit to eat in the middle. The eldest gets 6*d.* a day, the youngest 5*d.*, and an elder sister, now 18, who works in the field but not in a gang, 7*d.* They go sometimes 2½ or 3 miles to work. I dare not let this little girl here go, because she cannot stand the cold, else I should be very glad of the money. I have 11 children, five of them always at home; my husband gets 10*s.* a week.

67. Major Hare, of Docking Hall, a magistrate and landowner in West Norfolk, and chairman of the Board of Guardians for the Docking Union, kindly arranged a meeting of several gentlemen, clergy, and occupiers of land in the neighbourhood at his house for the purpose of discussing the subject of my inquiry. The views of such of those gentlemen as are occupiers of farms are expressed in the subjoined Statement, (No. 68.) Of these one is Mr. Henry Blyth, of Sussex Farm, near Burnham, who is also a county magistrate, and the owner as well as occupier of his land, and whose name is well known as an authority in agricultural matters; he was also Chairman of the Docking Board of Guardians for a number of years, from the formation of the Union in 1834. Another is Mr. James Everett, who was subsequently chairman of the same board; and the two others, Mr. William Browne, of Titchwell, and Mr. John Freeman, of Summerfield, near Docking. Of two or three other gentlemen who were unable to attend, Mr. Robert Overman, of Egmere, near Fakenham, a large occupier, and a name also widely known as an agricultural authority, had previously desired Major Hare to convey to me that he strongly disapproved of gang employment, and afterwards repeated the same views, (see note *). The views of the other gentlemen present, and taking part in the discussion, could not well be combined with those of persons speaking, chiefly from one common ground, on their practical experience as regards the cultivation of land; opportunities, however, were provided for the expression of separate opinions where desired, and some of these will be found in Nos. 1 and 80. The four gentlemen named above as occupiers of land, viz., Messrs. Henry Blyth, William Browne, James Everett, and John Freeman, afterwards approved, with some variations in opinion, pointed out in the notes, of the following Statement, No. 68, submitted for their revision, as expressing their views, and Major Hare also wrote that he "fully concurred therein."

68. *Statement above referred to.*

We are large employers of agricultural labour in the northern part of West Norfolk, occupying on the average each 1,000 acres or upwards. In the statement which we now make we think that we may be taken as fairly representing the requirements and the general views of the other large occupiers in this neighbourhood, say in the whole of the Docking Union, which comprises 37 parishes.

In this district gang employment, in its proper sense, is exceptional, not general; and where it exists at all is adopted chiefly only by the smaller occupiers. It has become less general than it was a few, say six or seven, years back, and in our opinion is likely to diminish still further rather than increase. What has discouraged it has been the force of public opinion created against it on moral grounds, *i.e.*, on account of the moral evils which result from it. This certainly is our own main objection to it, though our belief also is that it does not answer in the long run.

There is nothing in the nature of either the soil or the produce of this neighbourhood to make it less suitable for cultivation by gang labour than any other part of the county. Speaking generally, and dividing Norfolk about equally by a line from north to south, our soil and that of the rest of the western division is light, and that of the eastern heavy. It is light land in which the labour of women and children is most easily available. Men's labour is in general scarce in this neighbourhood, owing no doubt to the great rate at which emigration, particularly of active young men, to big towns, and more highly paid employments has been going on. The weekly wages of common farm labourers here are from 9*s.* to 11*s.* The higher classes get more.

The real reason which leads to the employment of gang labour is no doubt the desire or *supposed* necessity of saving something in wages, as the readiest, or, in some cases, only available means of lessening the cost of production. In our opinion, however, work is not done so efficiently, and therefore in the end not so economically, by gangs as by our usual method, *i.e.* by men and big boys, or by women working singly or a few together, but not in such a way as to constitute a gang. On some farms, however, scarcely any females are employed on outdoor work in any way.

What we understand by a "gang" is a company of persons, women, girls, or young boys, separate or mixed, doing farm work under an overlooker, or in reality a middle-man, who follows this occupation as an independent business, and makes his living by it. He commonly takes work by the piece, *i.e.*, by contract at so much per acre or given quantity, and finds his own labour and pays what he thinks fit for it. The usual day's work begins at 8 a.m., and continues till 5 p.m. in summer, with an interval of an hour at noon for dinner, and till about 3.30 p.m. in winter, with an interval of only a quarter of an hour. Boys do not go out at so early an age now as they used; formerly some have been known to go as young as 7 or 8. Where gangs are much employed the effect is to some extent to displace the labour of men.

It is desirable that boys should go out to farm work at as early an age as their strength allows, as they thus become more skilful and better labourers. This age may safely be put as low as 9† for the full day of 12 hours, usual in common farm labour, *i.e.*, that not done by gangs; but few would be injured by beginning even a year or two younger at the light duties which they have to perform, *e.g.*, minding birds, stock, walking by horses, &c.

When children once go out to farm work, whether in gangs or otherwise, we do not see how any scheme could be carried out for securing a portion of their time, *e.g.*, by half days, alternate days, weekly, or in certain periods of the year, for school instruction. The point has been much thought about, but any such scheme is, we think, quite impracticable. Evening schools have become much more general of late years, and these may be, and are by many, attended with advantage. One of us (*i.e.*, Henry Blyth) pays half the expense of teaching boys, but only if they attend five evenings in the week when the school is open; but if it were attempted to force them in any other way they would immediately refuse. Boys could not be expected to attend evening schools in summer if there were any.

It is a serious question, however, whether the advan-

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* I have since seen Mr. Robert Overman, who authorized me to say that not only did he highly disapprove of the system, but entertained the strongest possible opinion that it was altogether unnecessary.—H. J. Hare.

† I think 9 is too young for 12 hours.—W. Browne.

I agree with this, nor do I agree that even boys should be employed earlier than 9 years of age. Two hours of the 12 are devoted to meals.—J. Everett.

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tages resulting from what is called the improved education of the working classes are so clear as to make it worth while to encounter the difficulties of securing for them regular school instruction in the way referred to.* Has the improvement in education of late years had the effect of fitting them better for their position and duties in life as labourers, wives, children, or domestic servants, or raised their general moral condition? Experience does not, we fear, warrant such a belief, rather the reverse. There certainly seems to be much less (or no, W.B.) *parental* discipline and control, and after all the most real and important education is that of home.

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69. *Mr. Joshua Freeman*, Dersingham.—I am the principal tenant of the Prince of Wales on his Sandringham estate, and farm 1,000 acres of ploughed land, besides between 200 and 300 acres of grass. I have farmed on my own account nearly 40 years, and have all my life been engaged on large farms; never since I was a boy on less than 800 acres.

I have a very strong dislike to the employment of gang labour, both morally and practically. This dislike, however, is founded on what I know of gangs from their working on other land around me, not on my own experience. I never employ one, and would not on any account, even if I had to pay far more for labour by not doing so. The saving of cost, however, by employing them cannot, I should say, in any case be considerable enough to be of any practical importance where the land is let on fair terms. I will give an instance in which I lately had an opportunity of making a comparison. Contrary to my usual practice I put out some mangold wurzel pulling, topping, and putting on the carts to some of my men by the piece, viz., at 6*s.* per acre. I was told that two gangmasters employing women and children were doing the same work in my neighbourhood, one at 5*s.* 6*d.* and the other at 5*s.* 9*d.* per acre, with some beer. The difference of cost therefore could be but very small. My men at this rate could earn about 2*s.* 3*d.* a day each. I do not believe that there is any kind of farm work or any soil which makes it more necessary or desirable to employ gangs than I find it in my own case. I do not except weeding of any kind, nor can deficiency of labour be a sufficient reason for the employment of gangs. Labour is probably as scarce here now as in any neighbourhood. In fact, an exceptional demand for it is just now created by the number of persons required on the Prince's estates. But this is only temporary.

It has been remarked to me that it is as fair to have the principle of competition in agriculture as in manufactures, and that if the cost of labour can be diminished by employing gangs they must be employed. That may be so if the principle of general competition for land by putting it up to the highest bidder for rent is to be adopted as the rule; but this is one which I do not think at all satisfactory or likely to work so well for any of the persons interested as the plan of letting land at more natural rents to persons selected more out of regard to their known fitness and established position.

My main objection, however, to gangs is to the system itself, and on moral grounds. I dislike altogether the idea of a middle-man. It is not right that a man should make a profit by draining it out of the sinews of others, and I could not bear to have on my land any persons over whom I had not full and direct control, as I could not have in the case of persons employed by a middle-man. They might be disreputable persons whom I would not think of having on my ground. Gangmasters themselves too, so far as I have heard, are often some of the least respectable men, and such as I would not think of employing as regular labourers.

Even if one is a respectable man, what can he do if he tries to exercise an efficient control over such a number of persons? Except just while they are at work, they are out of his control altogether, and many come from distant villages. It cannot be but that they must corrupt one another. I object as a rule to the employment of females in outdoor work at all. More is lost than gained by it, even to their families themselves, and the girls become altogether unfitted for domestic service, and will very seldom go to it. No one can really mean, whatever he may say, that he would choose as a servant a girl who had been in a gang or at outdoor work if he could help it. As to the state of the families, persons who frequently visit them have observed that they can at once tell by the appearance of a cottage whether the mother goes to outdoor work or not, from the neglected look of the house where that is the case. The behaviour and language too of women and girls in gangs are said to be such that a respectable man, of whatever age, if he meets them, cannot venture to speak to, scarcely to look at, them without the risk of being shocked by them.

There is no gangmaster resident in this parish, but some persons from it go to work for gangmasters resident elsewhere, finding their way direct to the place of work. The principal gang in this neighbourhood goes, I should say, on the average three miles to work, the other less. One gang has lately been started in a parish of only small size, but it is fed from other villages. From an inquiry which I made this morning I understand that younger persons have been taken into the gangs of late than formerly, *e.g.*, down to 11 or 12 instead of at 15 or 16.

My general view is one of such strong and sweeping dislike to gangs altogether that I do not entertain the consideration of what means, if any, would be desirable for improving their condition. I wish that they did not exist at all. If the Government took any steps they should, I think, be in the way of limiting an age, below which children should not be employed, and their hours of work, and securing them some education. Girls should not go out under the age of 12, or boys under 9. Till then they should be at school, but it is desirable for boys to begin farm work early. There is nothing in the regular hours of work to do any harm to children above those ages, but in summer they often work longer hours. It would also be necessary that the sexes should be kept separate.

[A man here told me that his two daughters, aged 16 and 13, with others from this parish, worked in the gang of a neighbouring parish (Newton), and went distances of three and four miles, but no further.]

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70. *Rev. W. F. Welch*, Vicar of Stradsett.—The experience of an agricultural parish in Hertfordshire, in which I was curate a few years since, seems to show that anything in the nature of a half-time system, or indeed any compulsory system, of education is not applicable to the case of boys engaged in agricultural labour. While I was there several attempts to carry out some such plan were made. The plan was tried under as favourable circumstances, I think, as could well be, and failed not from want of will on either side (*i.e.*, of school managers or of employers of labour), but from the impracticability of the plan itself.

The subjoined letter has just been received from the present curate there in answer to inquiries which, as requested, I have lately addressed to him as to the working or results of the plan up to the present time.

The parish, Hertingfordbury, has a population of about 800, entirely agricultural. Earl Cowper is the

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* I cannot entirely agree with these conclusions. Surely education ought and does fit every man to discharge the duties in the position he is placed in by Providence better and with more integrity and industry. If such is not the result, surely it would be wise to allow our labouring population to remain ignorant and untaught.—Jas. Everett.

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principal landowner, and the school, originally endowed by a member of his family, is mainly under his control. First he consented to give his steward directions that no boy should be employed on his estate under the age of 12 years. Still boys slipped away to work, as the farmers and foremen wanted them, and the parents were willing for them to go. A kind of compromise therefore was made that young boys should work one half of the day, and come to school the other. This, too, proved unsatisfactory, and it was arranged that each boy should attend school three days in the week. This arrangement also was found to be broken into more or less, but it was still kept up when I left the parish, now 9 or 10 years ago. The foreman was requested to see that each boy brought a ticket from the school showing that he had attended that properly. How far this was strictly acted on I cannot say.

The education of the working children of the agricultural poor would probably be better secured by means of night schools, and extending their operation as far as practicable. I have generally found that boys are very willing to attend these, and, if late, will even come straight in from work without going home first for their meal; though when they are come they will sometimes fall asleep from sheer fatigue. Mr. Lingham's letter bears satisfactory testimony to the value of night schools where they can be established. They often, however, entail a good deal of trouble on the clergyman. I have to attend to mine entirely myself, having no help available in the parish.

In order to secure a certain amount of elementary education in the case of children destined for field labour, the plan might be tried of requiring a certificate of a certain quota of elementary knowledge as a preliminary condition of employment. There might be some difficulty as to the proper persons to give such a certificate, or as to the manner of testing the attainments of the boys. Out of the 30 parishes in this rural deanery the schools of only three are under Government inspection, though all, I believe, are under the supervision of the diocesan inspector, whose office, however, though onerous is entirely honorary. Such a requirement too might press hardly on some of the poorest families, and even exclude from work some of the boys most suited for it; for sometimes the dullest and most troublesome in school are found to be the ablest workers outside.

A better plan therefore might be to require as a condition of entering employment a test not of attainments, but of a certain amount of previous school attendance. The parents could at least ensure that their children attended school for the required number of times, and their interest would naturally lead them to do so. There is, however, the difficulty that poor and uneducated people do not look far forward.

My present parish is small, about 160 people, and has no gang, but occasionally children go to work in the gang of a neighbouring parish. Just now I know of only a boy, aged 10, and a girl, aged 12, who do so, both from one family. Often, I know, they have to trudge a distance of four or five miles to and from their work with the gang.

A few years ago I was curate of Downham, in which the gang system was developed under the worst aspect. One day in harvest time, while crossing the fens some miles away, I came upon a number of my people, including women, boys, and girls, whom I knew to be regular workers in a gang. Whether at the time working as a gang I cannot positively say. Seeing them so far from home I was led to ask how they managed this, and was told by them that they came out on the Monday morning, and did not return home till the Saturday night, the farmer letting them have a barn to sleep in. My belief is that this was nothing out of the usual course in the case of distant work.

71. *Letter from the Rev. J. L. Lingham above referred to.*

Hertingfordbury,
DEAR MR. WELCH, 1st June 1866.

(The letter, after referring to the half-time system, mentioned by Mr. Welch to have been attempted as above, as not in actual operation when the writer came to the place, and as apparently impracticable in agricultural parishes, proceeds):—I made strong effort, for two years or more after I came, to induce the farmers not to employ boys under 12 years of age, and made it a rule that none under that age should be admissible at our night schools, and that all between 12 and 16 should be *compelled* to attend the night schools on pain of losing their employment. We found, however, though very fairly supported by the farmers for a time, that these rules did not work at all well, and after a good deal of consideration they were at last abandoned. Since then the night schools have worked admirably, and we were well satisfied that we were right in removing the compulsory rule as to boys between 12 and 16, and leaving it free for them to attend or not as they pleased, finding that, practically, they were then most willing to attend. We have usually had about 45 on the books during the night school term of *five months* or thereabout (four nights in the week), the junior class consisting of a few very young boys now that the restriction as to age has been done away, but this we have preferred to losing them altogether.—(The letter then speaks of the benefits produced by the night schools.)

Yours very truly,
J. L. LINGHAM.

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72. *Sarah Ann Roberts*, Tilney-Fen-End.—Soon after I went out with the gang, when I was 11 perhaps, I got the rheumatism. The work was so wet; we have been dripping through, especially in wheat. When low it would be up to our knees, and sometimes it was up to our shoulders; we have weeded it when in the ear. I have been so wet that I have taken off my clothes and wrung them out and hung them up to dry on the top of the wheat or anywhere while we went in again to weed. We durst not hang up only light things, such as aprons, handkerchiefs, &c., not petticoats. We have had to take off our shoes and pour the water out, and then the man would say, "Now then, go in again." Often when it came on to rain there was no shelter within reach, but, if there was any, sometimes he would not let us go to it till we were drenched. I often blamed him for making my bones sore.

I have great pain, and when you came in just now began to tremble, fearing it was another doctor at me. My knee is so bad, and nearly as big as that loaf, but I have to keep moving it about for ease. I can only go with a crutch and stick.

There were 40 or 50 of us, a good deal more girls than boys. We started at 6.30 a.m. If it was too far they would send and fetch us, but we have started at 6 a.m. and not got on the ground till after 7 if we made ever so much haste. We left off at 5 p.m. or a little later. It was all hard work.

The man knocked us about and ill-used us dreadfully with hoes, spuds, and everything, he would not care what. He was an old man, white-haired, and used to go about with his "dickey" (donkey), as he could not walk far enough else. He used to "gibbet" some if they were idle, *i.e.*, come behind them, put his hands under their chin, and so lift them off the ground. I thought he would have stopped one boy's breath so; the boy was black in the face from it. We dared not complain. One ought not to be glad to hear of any one's death, but a good many children were glad when he died.

[This young woman seemed to suffer great pain, and looked quite broken in health.]

73. *Sarah Roberts*, mother of the above.—All my children went out in the gang as soon as the old man (gangmaster) thought them of any use; say

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from 9 years old. I was left a widow with seven children, and have buried three. Three together used to bring me in 5*s.* or 6*s.* some weeks. I have been out myself also. If you work in a gang you have a long way to go, and into other parishes, but if you work for a farmer you have only to go to his farm. Children don't go now so much as they did.

I've heard children give a shocking character of a former gangmaster. One of my girls complained that he had hit her with the spud, but I told her that no doubt it was her fault.

My daughter there has been groaning like that all the afternoon; she is a cripple with the rheumatism, and will never get the use of her leg any more. I always blame her work for it, and so does she, and the doctor says the same. She was never ailing till she did go to work. My other children have had the rheumatism, too. My husband did not have it, nor did I, except once, when I was 16.

74. *Mrs. Sampson*, gangmaster's wife. — My husband is a public-house keeper, and has also kept a gang here nine years, and works for all the farmers about; they asked him to take it up because the former gangmaster robbed them so. My husband has had as many as 40, perhaps, at a time, boys, girls, women, and some men. They work together usually, but perhaps for hoeing my husband may send off the lads with his son. I have known him have three gangs at once. He nearly always takes his work by the acre, and sets so many drills or rows to each worker at so much a drill. A woman that could take 12 rows in a day would get 1*s.*; a girl would take perhaps four, five, or six rows. If they don't do the number to his liking he would not set them so many, because if the work was not well done he might not go to that farmer any more. Sometimes he gains by the work, sometimes loses. A woman is paid half as much as a man, *e.g.*, when men's wages are 2*s.* a day women get 1*s.*

They start from here at 6.45 a.m., or sometimes, when they are going far, at 6.30. Some may join near the work instead of meeting here. They leave off at 5.30 p.m., stopping at noon for an hour; that's all. The work is chiefly in the fen, and almost every day lies an hour off; often they go five miles; if they go further than that they have to be fetched in a waggon, but there have been no waggons sent for a long time now. My husband has never slept out with his gang. He was wanted by one master to go to Shouldham, which is so far that they must have slept out, but he had plenty of work here and would not go. They would have been lodged at a public house, I suppose.

Many children here go before they are fit, say from 9 or 10 years old, but what do they earn? There is their 4*d.* (a day), but look what shoes they wear out, and the work pulls their dresses to pieces. You may be sure the poor things don't like the work. I have had two girls who have gone out with the gang, and have boys besides.

We came here from Magdalen; there was a gang there, and is still, but I think only boys and girls, and the man paid by the day, 2*s.* or 2*s.* 6*d.*; they work in the same way as here.

There is no school down here; I wish there was. I have sent a child to day school up to St. John's (the village of Terrington St. John's, in which the parish school is.—J. E. W.), but it was too far; I should think eight miles there and back, and I shall have to send this boy there too if I can't get one nearer; it is too far. A school in another parish, Walpole, is nearer, being only two miles, but I should have to pay, I should say, 6*d.* a week there, and that makes a difference.

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75. *Rev. J. Bramhall*, vicar of Terrington St. John's, and a county magistrate for Marshland Division of Norfolk.—Of late years, more particularly within the last four or five, the system of employment in regular organized gangs has very much declined in this immediate neighbourhood, so much so that now I scarcely ever see the old-fashioned gangs at work, and after making inquiry in several quarters can only hear of two (at Tilney and Walpole Fen-Ends) regular gang-masters in the neighbourhood. What has chiefly led to this decline I cannot say. It may perhaps in some small degree be owing to the attention which has been directed by myself and others to the evils of the system; but I hardly dare venture to think that this can have had more than a partial influence. It is possible that the decline during the last few years may in some measure be owing to the remarkable dryness of the seasons from 1861 up to last autumn inclusive, and the consequent diminution in the growth of weeds, and so in the need of weeding, which causes the chief demand for the labour of gangs. Moreover, of late years there has been a very great improvement in the draining and cultivation of the land, which has in consequence become much drier and cleaner. I have known this district for 21 years. Drainage is now carried to such an extent that there is in anything like a dry season a great want of water, which has often to be brought from long distances. Many ditches have become dry and useless, and have been filled up, ponds have had to be deepened, &c. Except in spring we have lately had no water in our ditches and very little in the ponds. Here for drinking purposes we have to depend upon rain water. The *growth* of weeds, supposing there to be good cultivation, depends very much upon seasons, and the workpeople talk of (to them) a good or bad season for weeds.

The general practice in this immediate district now is for farmers to employ young women, big boys, and children under one of their men, but this is not considered to be a regular gang. It is hard to define a gang; but I consider that a regular gang means a number of young people of both sexes hired by a ganger on his own account, who makes his living by it as a profession, either permanently or for certain seasons. But women and children are largely employed on the land in different ways, *e.g.* weeding, hoeing, and thinning mangolds and turnips, and topping and tailing them for storing, and spreading the dropped dung of animals. Sometimes girls as well as boys keep crows. A good deal of this work has been carried on in this and the adjoining parish by a man whom I may call a "ganger" of crow-keepers, who takes out his son and another boy or two whom he hires, each having a pistol or gun; these going about from field to field, lying together but belonging to different parties, can look after a great quantity of ground, and thus save a larger number of crow-keepers.

A number of boys are employed in tending sheep and cattle, to keep them from straying from their fields, and the number of these boys has had to be greatly increased of late, since the ditches have dried up so much; I should say that five times as many boys are needed for this purpose now as were formerly.

Women and big girls are also employed with private thrashing machines on the farmer's own premises when steam or hand thrashing machines are employed, though now there are not many of the latter. The owner of the machine usually contracts with the farmer to do his thrashing by the bushel or coomb, and finds his own labour. Mustard and cole seed are thrashed in this way out in the field where they are stacked. The work includes throwing down the sheaves or bundles from the rick, in which women sometimes take part, feeding the machine, carrying off the straw and the seed as it comes out, raking, winnowing or sifting the seed, and putting it in bags.

Marshland is a perfectly flat district of some 13 miles or upwards in diameter, lying between the Ouse and Nene rivers, with the Wash for its northern boundary. The greater part of it is now under the plough. Part of it has been settled even from the time of the Romans, and there is an old Roman sea wall on it. One portion of the land is stiff clay, another is fen, and a third sandy. There are 17 country parishes in it, of which several extend to very great distances. The extreme points of my own, which has a population of under 800 persons, lie fully

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12 miles apart, with wide gaps intervening, and one or two neighbouring parishes extend even further. The population lies in groups, the largest generally near the church.

The farms in Marshland, however, are small, say from 100 to 300 acres. The wages of labouring men vary at different times from 10*s.* to 13*s.* a week, and on the average may be put at say 11*s.*, and the rent of cottages on the average at 1*s.* 6*d.* a week, some more, some down to 1*s.* On the whole the people are comfortably off as compared with many districts. The majority of the cottages in Marshland have two rooms, one for living in, one for sleeping, the former being sometimes also used for sleeping. Some have three and even four rooms, while some have only one for every purpose whatever. In some cases a whole family have to live in a single-roomed house, *e. g.* I have known a family of eight living in one, and a family consisting of a father, mother, three sons, and sometimes a grown-up daughter is inhabiting such a house now. Too often when there is a third room a lodger is taken. I fear that much immorality, and certainly much want of a sense of decency amongst the agricultural labouring classes, are owing to the nature of their homes and the want of proper room, more so probably to this than to gang or field work, to which they are often attributed. Still field work of any kind, especially in gangs, is objectionable for girls and women though much less so under the present practice *here* than in the professional gangs. As magistrates we have had before us cases of indecent assault where boys, *i. e.*, the bigger ones towards 14 or 15 years old, have meddled with girls in the gangs, *e. g.*, by pulling up their clothes and other indecent conduct, to say nothing of filthy language; but I do not remember one for the last three or four years. It was but seldom that a case came before us, not because of the infrequency of such behaviour, but because little was thought of it, and it was passed over unnoticed. I have reason to believe that the girls were generally as bad as the boys.

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76. *Letter from the Rev. Hinds Howell, Drayton.*

My dear Sir, Nov. 29, 1866.

Although I believe the Commission with which you are connected was appointed specially to inquire into the "gang system," yet in case of the Commissioners being willing to receive information on other questions pertaining to the employment of children I have included the following in my answer to your inquiry:—

1. The "gang system," as practised in West Norfolk, is almost unknown by name in this immediate neighbourhood, and I know of only one case where it has been partially attempted, and that only with boys for the purpose of picking "quicks" during the summer, and this by a West Norfolk yeoman who holds land here as well as there; but,

2. There is employment for children much too young for "keeping birds," as the provincialism goes, *i.e.*, "scaring birds" from the young corn, and unfortunately from the scarcity of boys very young girls, of 8, 9, and 10, are employed in all weathers and in most exposed situations to do this, to the injury both of their physical and moral state, and to the utter neglect of educational advantages; as the parents seem glad to obtain the present benefit of 1*s.* 6*d.* or 2*s.* per week although to the future injury of their children. And this brings me in the 3rd place to mention the cause of the scarcity of boys. These are employed in a paper mill in the district, not only by day but by night, and their employment tends much to their injury, to my mind, *in every way, especially the night work.*

I trust in any legislation it may be forbidden: 1st, to employ girls at all at an age when they ought to be at school, and certainly not for such a purpose as I have mentioned; and, 2nd, that boys should never be employed for night work under any circumstances, and not for mill work under the age of 12 or 14.

I am, &c.

To J. E. White, Esq. HINDS HOWELL.

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77. The following statements, from No. 78 to No. 116, both inclusive, are from written communications in answer to the printed Form of Questions, to which the numbers refer, except in the case of the first communication, No. 78.

78. *The Right Hon. Lord Walsingham.*—The first question that occurs to me is as to the difficulty of defining a gang. Perhaps it may be said that where a person contracts to do certain work, employing any others at his own option to do the work under his superintendence or with his assistance, the contractor may be said to employ a gang. This is a process by which a large amount of industrial work is carried on, and it has for many years been applied to agriculture. There may be special evils arising out of this application; but if it is intended to treat this question as applying to agriculture alone it is necessary that the question as so applied should be thoroughly understood. Many operations in agriculture are carried on as above in this neighbourhood, and this is what is generally understood as the employment of a gang. It is hardly possible that an improved system of agriculture can be carried on without such employments. Weeding, hoeing, getting up and heaping turnips and mangolds, topping and tailing, &c., are illustrations of the work so carried on. Such things are required to be done quickly, and many extra hands are required at short notice, and if persons skilled in such operations can be obtained a vast benefit is secured. It is, therefore, not probable that any attempt made to suppress the gang system altogether would be successful. But there are many other operations which are performed by companies or under contract which it would be difficult to distinguish from which is usually termed the gang system. Reaping even and mowing are performed by contract, by the acre, or as is more usual in this neighbourhood by men, each paid a certain sum for the entire harvest; women and children are employed to assist, working with the men, tying the sheaves, &c. In thrashing also by machine, which is done by contract, women and children are constantly employed to assist, and it is difficult to say what evils attend the gang system which do not also exist in these and sundry other agricultural operations. But the principal objections made to the gang system appear to be these:—

(1). The employment of men, women, and children together.

(2). The distance travelled to the work.

(3). That children employed in gangs are taken to work at an earlier age than is desirable; and this last objection is one which will be probably much insisted upon by clergymen and others who may be more conversant with the evils than with the advantages attending the system. But this objection applies generally to all agricultural work. Children are at a very early age employed for crow-keeping, with horses, and otherwise in the various occupations of the farm. On the other hand, it is contended that by this early employment they help to maintain themselves, and learn better to make themselves useful and consequently valuable than if more carefully tended at home or at school.

No. 2 is more peculiarly an evil attending the system in question, as it is obvious that a company undertaking work, wherever called upon, must go further in search of employment than ordinary labourers constantly working on any particular farm.

No. 1 is not peculiar to the system. It will be found impossible altogether to prevent men and women working together, and some evils arising in consequence. The nearest aproach that can be made is to say that where a certain number of persons are employed together the sexes shall not be mixed, but when it is observed that women working in gangs are

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often rough in manners and otherwise ill-conducted, it must be taken into consideration that women of good conduct would probably in general obtain better and less laborious employment, and the rude manner and doubtful character may be a cause rather than a consequence of their connexion with the system. It would however be desirable, and not difficult, to prohibit the employment of very young children in such company. Generally it may be said that many who work in gangs would not otherwise be able to procure a subsistence. Men unable to do hard work, or with a little capital, make good wages by becoming masters of gangs, and the extent to which the system prevails of doing work by contract in farming is a proof that it affords advantages to the farmer as well as to other employers of labour.

WALSINGHAM.

Merton Hall, Thetford,
Dec. 22, 1865.

79. *Mr. Edwd. Fellowes*, M.P. for Huntingdonshire. —(1.) One gang employed in the parish (Haverland); but the master and many of the children belong to the neighbourhood of Reepham.

(10.) When children are in good health and well-treated the employment is favorable, the principal thing to guard against being the distance they have sometimes to walk to and from their work, which is occasionally much too great ("From half a mile to three miles." *Answer* (5)—J. E. W.); otherwise the labour is not injurious, judging from the appearance of the children.

(11.) Nearly all can read, many attend the Sunday school, also evening school, and occasionally they work one hour overtime weeding, &c., which earnings go towards the expense incurred in their education.

(12.) I consider the moral condition of the children to be quite equal to that of the children of agricultural labourers in general.

(13.) With regard to the moral condition of the children, I do not think that their working in gangs under proper supervision has a prejudicial effect upon their morals, when they are not allowed to mix up with grown-up young men and women; but when such is the case the effect is undoubtedly bad: and with respect to the latter class there can be no doubt but that the separation of the sexes is absolutely necessary. A large amount of immorality is certainly caused by their constant association, especially during the noon hour, and in my opinion it would be a great improvement upon the present system if no boys were employed with the girls.

I think it would also be very desirable that the magistrates should have some control over the gang-masters, so that no man should be allowed to start a gang without producing satisfactory proof of his fitness in point of good character, temper, &c., &c., to be entrusted with the management of children; and upon his doing so the magistrates to be empowered to grant him a certificate, which they should have authority to revoke upon any charge of improper conduct being proved against him.

Perhaps some limit might be put as to age (say 7 years), before which period no child should be allowed to work in a gang; in that case education must be provided, as it is not to be obtained in many agricultural parishes, and with weekly earnings of from 9*s.* to 10*s.* it is impossible for the parents to pay for it; and it then becomes a very serious question for a labourer with five or six young children, the two elder of whom can perhaps earn from 4*s.* to 6*s.* per week in addition to the wages of the father, whether by any legal enactment he should be deprived of such a source of additional income.

EDWD. FELLOWES.

3, Belgrave Square,
May 9, 1866.

80. NORTH CREAKE.

Population - 708. Acreage - 3,584.

(1.) To a certain extent by women and girls not under 15, (or "none under 13 years."—Q. 3. "The "boys from 10 to 14 employed on the farms; none in "gangs."—Q. 4. J. E. W.)

(13.) My own experience and observation, extending over a period of 35 years, as rather an extensive occupier (about 1,200 acres) of rather light land, have resulted in the firm conviction that the gang system as understood in this county, namely, the employment of young girls and boys from 10 to 13 years of age, and even under 10 years, superintended by either a man or woman, who in most instances contract with the occupier for various works at a certain price per acre, and thus out of the earnings of these young persons very amply repays himself or herself for their own labour, is both physically and morally injurious to those young persons, more especially where the sexes are mixed, and renders the females who are thus early debarred the opportunity of education—— [something, it is not clear what, is left out here, but the meaning is plain.—J. E. W.] and gives them a decided preference in after life for field employment rather than for domestic service. I should myself rejoice to witness the time when by some well-considered measure the employment of young persons, more especially females, under a certain fixed age would be rendered illegal.

But I do not think it either practicable or desirable that women and girls of mature age should be precluded from field work. From the low price of manual labour existing in this and other counties it becomes a matter of stern necessity that the wives (and daughters in some instances) must by their aid and labour enable them to meet the charges for rent and other items necessary for clothing, &c.; and, unfortunately, in this and other counties many young girls have been seduced and drawn away from the path of virtue (often more to be pitied than blamed). This class must of necessity in most instances be driven to field work for their support, so few persons there are who are inclined to take such persons as domestic servants. Nor do I think, in the present improved method of farming in this county, it is possible to carry out those improvements without the occasional aid of female labour.

But at the same time I am equally convinced that the gang system is altogether undesirable and may be dispensed with; and can only, in conclusion, again repeat that I shall be one to rejoice to see the day arrive when this highly demoralizing system is put an end to.

I am, &c.
North Creake, JAMES EVERETT.
Nov. 17, 1865.

81. SEDGEFORD.

Population - 742. Acreage - 4,180.

(1.) A gangmaster resides in this parish, but the chief part of his work lies out of the parish, in Snettisham and Sharnbourne, and at the busiest time the majority of persons employed by him belong to other parishes.

(2.) At the present time (11th December) the "head gang" only is employed. It consists of 13 females, of whom eight belong to this parish, the youngest of whom is about 13 and the eldest about 22 years old.

(3.) In summer about 30 females are employed; occasionally, but not usually, a few married women among them. Their ages range from 13 to 25 or thereabouts. This is the "full gang." (There is also "a small private gang of female children on one farm." —J. E. W.)

(4–8.) (Work of the usual kinds.—J. E. W.) They are paid by the piece, and earn about 8*d.* a day. They walk three, four, and five miles to their work, leaving home about 7.45 in winter and 7 in summer, working till 4 in winter, 4.30 in summer; they return home

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about 6. They are at liberty to rest an hour for dinner, but they often in winter do not avail themselves of it that they may finish earlier. They are fairly and honestly paid, not overworked, and I never heard of any case of ill-usage in this gang.

(10–12.) The ill effects, as far as I can judge, are not physical, but moral. I believe the gang to be the nursery of vicious habits. As respectable parents seldom or never allow their children to work in it, it consists chiefly of young girls who have had little or no education, and whose home influence has been for evil. They grow up mutually strengthening one another in vice.

(Refers further to their appearance, manners, and unfitness for home duties, and to the presence of bad characters.—J. E. W.)

J. Ambrose Ogle,
Vicar of Sedgeford, Rural Dean.

82. TITTLESHALL.

Population - 544. Acreage - 3,271.

(One gang, mixed. Number has varied from 40 to 10; average last season, 25. Actual work, eight hours, and say one hour for going and returning. Extracted from Return.—J. E. W.)

(11.) Those who work in the gang, and, indeed, generally children now go so early to work in agricultural parishes that the opportunity to educate them is almost lost, except what can be done by night schools for boys.

(12.) I have no hesitation in saying that, viewing the gang system in a moral point of view, it is vicious in every way. The mixture of the sexes is obviously bad. Any person of common observation who takes an interest in these questions can easily perceive a striking deterioration in character when children and those from 13 to 18 join the gang. The girls become bold and immodest; the boys insolent, with what I would term a precocious independence, alike impatient of parental authority or other control. I asked the gangman here, who is a respectable representative of his class, whether he felt responsible at all for the conduct of his gang. His reply was, only while they were at work; when they were out of the field on the hard road (as he expressed it) his control over them ceased. Though he endeavoured to get them to walk back to the village with him, some would and some would not.

(13.) That at certain periods of the year, and in certain species of labour, the gang is a great convenience on some farms I do not doubt; but the girls who work in them find (as a general rule) domestic service distasteful, and, indeed, are in a great measure unfitted for it.

As far as I have been able to get correct information, I find the youngest boy in the gang this year was about 9 years of age, and the youngest girl about the same age.

Boys between 7 and 8 years of age begin crow keeping before they are strong enough to go with a gang.

I would also observe that young persons working in the Tittleshall gang come from other parishes, Mileham and Litcham, each about two miles distant.

In the parish of Wellingham, of which I am rector, there is no gang, but several girls and young women of this parish work in a gang at Weasenham.

Kenelm H. Digby,
Rector of Tittleshall (and Rural Dean.—J. E. W.).

83. WEASENHAM, ALL SAINTS.

Population - 360. Acreage - 1,988.

Generally the gang system is much to be deplored, for this reason. The sexes work together, of all ages, good and bad characters, which very soon affects the morals of the good, and young girls are very liable to get a dislike to leave their present work for service. They then marry young, not knowing anything of the duties of the household. In this parish we encourage in every way the young girls to enter service by not employing them after 15 years of age, and obtain situations for them, so that they are too young to take much harm while in the gang. They all go to day school before going to work, which is kept up by evening and Sunday instruction afterwards.

(Form addressed to Mr. Blyth, an employer.—J. E. W.)

84. LONGHAM.

Population - 325. Acreage - 1,300.

Having had no experience of the "gang system," from its not being adopted in this locality, it has been a matter of doubt whether I ought to express any opinion at all on the subject, but if I may be allowed to do so it would be so far in favour of it, that, if youth of both sexes, say from 11 or 12 to 15 years of age, were put under the care of a well-conducted and proper person to manage them, there would not only be nothing to fear, but on the contrary much good might result from it. But women as a rule should not be employed, in order to avoid the contagion from bad characters. If women are employed, then, I say, employ them by themselves.

Yours, &c.
J. Hastings.
(An employer.—J. E. W.)

85. GREAT DUNHAM.

Population - 496. Acreage - 1,968.

(1 and 2.) There is only one gang in this parish looked over by one man, who contracts for the work done. About 6 boys and 10 women and girls at present (November). The gang formerly was much larger, but by getting the girls out to service early it has effected this.

(10.) It checks the growth of those who go out early, and tends to rheumatism with many.

(12.) Better than it was, but not as it ought.

(13.) It tends to make them too independent in early life, and they lose the education that they ought to have.

(Form addressed to Rev. W. F. Jex-Blake.)

86. LITTLE DUNHAM.

Population - 327. Acreage - 1,818.

(1.) There is no regular gang belonging to this parish. One of the farmers employs a gang (mixed—J. E. W.) from the adjoining parish. The other farmers employ severally a few women and children (usually 23 in all, occasionally a few more.—J. E. W.)

(5.) The gang 1 to 4 miles, the others 1 mile or 1½ miles.

(13.) It would be most desirable to obviate in some way the moral evils of the system. All who work on a farm should be responsible to the farmer for their conduct. Gangs are of necessity more or less disorderly. The gang masters are often bad characters, and perhaps incline to drive rather hard bargains. It would be far better for each farmer to have a company of his own.

As regards education it would be a great gain if it could be arranged that no children should be admitted to regular employment on a farm till they had attended school a certain time, or had a certificate that they could read and write fairly.

E. Montague Hare.

87. CASTLEACRE.

Population about, 1600. Acreage - 3,000.

(1.) Three companies work in this parish. There are others who work in adjoining parishes who live in this.

(2.) From 20 to 30 in each company, almost always employed.

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(3.) From 10 to 11 to grown-up young women. Very few boys work with them, and those from 10 to 11 years old.

(5.) From 1 to 1½ miles. Those who work out of the parish go two or three miles, and some more than that.

(6.) About seven hours.

(10.) They earn a considerable sum of money during the year, I should say more than 1,000*l.* a year in this parish.

(12.) I fear there is more immorality when they get home than when they are at work.

John Hudson.
(An employer.—J. E. W.)

88. LITTLE MASSINGHAM.

Population - 132. Acreage - 22. (Qy. 2,200? —J. E. W.)

(13.) The object of gangs cannot be evaded, and it is the wisest thing to try and make them respectable and respected.

Sir,

The report on the other side relates chiefly to a small gang of seven persons employed on one of the farms in this parish regularly,—the only regular gang in the parish affixed to one farm. The members of the gang belong to Great Massingham* parish, but are employed in this.

The master of another gang lives in this parish, but does no work in it, nor does he employ any person living in Little Massingham. He has a large gang under him collected from Harpley and Rudham and employed in Harpley. From him I collect the following particulars of the Harpley gang. Forty persons in this gang; 20 married women from 25 to 35 years of age, 16 single girls from 12 to 20 years of age, four boys from 10 to 14 years of age. They walk about three miles every day; if more than three miles they have 2*d.* a day additional. Number of the gang from February to June was 40, and from June to the rest of the year 20. * * * *

There is little alteration in the business and management of gangs since the Report of the Commissioners in the year 1843. What changes have taken place are generally for the better. The gangs and gang masters defer more to public opinion. Public opinion is the great remedy for disorderly manners.

(Two other small gangs from Great Massingham occasionally employed, women and girls.—J. E. W.)

The Harpley gang is a fair type of the large gangs.

I am, &c.
C. D. Brereton.
Rector of Little Massingham,
J. E. White, Esq. (and Rural Dean.—J. E. W.).

89. GRIMSTON.

Population - 1,300. Acreage - 3,483.

(1.) Yes, on a large scale, under gangmasters or middlemen. There are three gangs, and a fourth which consists chiefly of young persons from this parish.

(2.) About 50 or 60, half of them on an average being females, or chiefly girls; more girls than boys in summer, and more boys than girls in winter. Number about 35 or 40 from Michaelmas to April.

(8.) Well treated when the masters are good, moral, humane, and considerate persons. But this depends very much upon the character of the masters.

(9.) Boys and girls work together.

(10.–12.) (All three reported bad.—J. E. W.)

(13.) In the present state of things the gang system may not at once be abolished by legislative enactment, but a considerable modification of it may be effected, so as to avoid some of its worst evils and to improve the general condition of the young people employed.

1. Mixed gangs may be prohibited, *i.e.*, boys and girls should not be allowed to work together. This practice is observed in some parts of the country, and may be made general.
2. The age may be limited to 12 or 13.
3. It may be made a rule that none should be admitted who have not been at school before, if there be a school in the place, and have learnt at least to read.
4. Some mode should be devised for securing *good* gangmasters, such as the sanction of some officials of the parish, or a licence to be signed by the minister, churchwardens, and overseers, which may be revoked for any irregularity or non-fulfilment of the conditions. But if the whole system could be abolished that would be much better.

P.S.—There are some persons interested in the maintenance of the gang system who assert that there are as many servant girls found in the family-way before they are married as there are gang girls; but many of those fallen ones that they reckon among servant maids had first been in the gang.

(Form addressed to Rev. J. Rowlands, Rector. —J. E. W.)

90. MIDDLETON.

Population - 894. Acreage - 3,030.

(Two gangs. Present number (in May) 42. "Varies but little, perhaps from 35 to 50 occasionally." Extracted from Return.—J. E. W.)

(9.) Together. The gang is, however, frequently divided into two or three detachments, working in different places.

(10.) The women and children frequently suffer from exposure to cold and wet, and the foundation of chronic ailments is laid in the weaker subjects.

(13.) With respect to children I think it a bad system; but it enables parents of large families to get on respectably when they would otherwise find a difficulty to maintain their children; and it is bad also in taking the married women from their homes. (Of the 42 in the Table, 16 are married women.—J. E. W.) I do not think that they like it themselves, but they adopt the system as a means of increasing their incomes. On the other hand it sometimes finds employment for a few men and lads who might otherwise be unable to get it from the farmers themselves.

J. H. Kersley, L.L.D.,
Vicar of Middleton.

91. WALSOKEN.

Population - 2,685. Acreage - 4,800.

(1.) There is no *system* of this kind in this parish, but occasionally young persons are employed in companies of from 6 to 12 in field work.

(4.) In gathering garden produce, many acres being devoted to the growth of fruit and vegetables for the London market; and in weeding corn, chiefly in June.

(6.) Usually from 6 a.m. to 6 p.m.

(13.) I think the only objection to the system as it exists here is that boys and girls work together, but in gathering garden produce girls are so handy that employers of labour wish to engage them. There is, however, a growing desire on the part of mothers of families not to send their daughters to field work. It is not desirable that they should go to this kind of work under any circumstances, and I hope that in the course of a few years such instances will be rare.

John Davies, M.A.,
Rector of Walsoken.

92. UPWELL ST. PETER.—Norfolk and Isle of Ely.

Population - 2,500. Acreage, between 10,000 and 11,000.

(1.) There are four gangs in this parish. They are each managed by a separate gangmaster, who is paid *2s. 6d.* per day by his master, and receives *1d.* per week from each person in his gang. The wages of those employed in the gangs are,—lowest, *6d.*, highest, *1s.*

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* Great Massingham has a population of 934.—J. E. W.

(2.) (Numbers on "rough average" about 27, but vary considerably; largest from harvest till nearly Christmas, and from March to May or June—J. E. W.) The two largest gangs have about 40 persons in each.

(3.) Boys, from 8 to 14. After they are 14 they can get better wages. Girls, from 10 to 16. Married women of all ages.

(5.) From one to five miles.

(13.) The testimony of the wife of a gangmaster is decidedly opposed to the system. Were the sexes not mixed together in the gangs I think it would be better for their morals.

W. G. Townley,
Rector of Upwell, St. Peter, Wisbech.

[A Return from an employer in the same parish reports (1–3.) "about five public "gangs," "about 20 in each," "age from "10 to 20, single people, very few mar-"ried women." (5.) "From two to five "miles occasionally." (11 & 12.) "Only "middling." (13.) "Think the female would "be far better in service, but most of them "prefer field work."

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93. WELNEY.—Norfolk and Isle of Ely.

Population, about 1,100. Acreage - 5,444.

(1–3.) (Three gangs. About 30 boys, 30 girls, and 20 women; more in summer than winter. Extracted from Return.—J. E. W.)

(5.) Three or four miles, some not so far.

(6.) Ten hours. From leaving home to returning 13 hours.

(13.) The gang system is the most ruinous thing possible to the young of both sexes. (Some remarks follow to the effect stated more at length elsewhere. See No. 48.—J. E. W.)

The children are taken from school at 7 and 8 years of age for field work, and rarely attend more than four or five months in the winter, and some never attend school at all, though there is a good free school in the parish open to them.

Children ought not to be allowed to work in gangs under 10 or 12 years of age. The girls ought to be presided over by a married woman, the boys by a man. The money earned by the children is not infrequently spent in drink by the father.

W. Hilton Hutchinson,
Welney Rectory.

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94. HILGAY.

Population - 1,724. Acreage - 7,800.

Sir, Hilgay Rectory, May 12, 1866.

I. (One common gang, mixed; number, 23. Ages, males, from 8 to 14, females, from 8 upwards. Two gangs occasionally from other parishes. Extracted from Return.—J. E. W.)

(5.) Nearly four miles; the average is two miles. One (gang) occasionally comes from Downham to (a place marked) in the plan (annexed), nearly five miles.

(6.) They leave home at 7 a.m., and off work at 5½ p.m., reaching home again according to the time the walk takes.

(7.) Half an hour for breakfast and an hour for dinner.

(11.) Neglected by themselves and parents, hardly one attending the evening school in the winter. Of the 12 children only four attend church and Sunday school after they have begun to go out, and (the others?) I am afraid go nowhere.

(13.) From the characters in this gang I should think the tendency decidedly bad. But I have no reason to suspect any thing worse than bad language, and occasionally insults to passers by in the field. The misconduct is in the village afterwards, the temptation to which is greatly increased by balls at the public houses (20 in the whole parish, besides beer houses), once nearly every Saturday night, less frequent lately.

II. But there is another sort of gang,—one of children and women, overlooked by some labourer belonging to the farm, and generally, but not always, working on the same farm. Some farmers set a woman over the children. Some never employ children, but keep women on regularly, or hire women only.

(These gangs are described as numerous, and averaging eight or ten children each, with or without a few women. An estimate, arrived at with the help of the school registers, gives the number of children so employed in May 1866, including some at crow keeping, as nearly 100. Of 19 of these boys under 13 years from one school four of 9 years old, six of 8 years old, and one of 7 years old were employed in weeding, and two of 7 years old and one of 6 years old in crow-keeping; and of 10 girls under 13 years from the same school three of 9 years and three of 8 were employed in weeding. The distances travelled are given as rather less than in the regular gang, viz., 3½ miles, the average 1½, and the hours of work as rather longer, viz., from 7 a.m. till 6 p.m. They attend schools, day, evening, and Sunday, and church well, according to their opportunities. Extracted from the Return.—J. E. W.)

(12.) * * * Some parents pinch themselves to keep their children there (*i.e.*, at day school), the desire for domestic service increasing yearly. The girls in that class do not work in the fields, and never will unless necessity obliges them. Still, as far as I can observe, young women in service are as often seduced as those in the fields. The children of the little farmers work with their parents and take no harm. * * *

(13.) As to the necessity in order to live.—A wife with five children from 7 to 16 years old will earn, when there is work, *15s.* a week, and the husband *10s.* All together (will earn) from *10l.* to *12l.* during harvest. What is desirable is that the mother and children should be able to bind as fast as the father can mow. A cottage with a garden will be *5l.*; without, *4l. 10s.*, when the industrious will hire a rood at *16s.*

Nearly all the women of this parish do field work, weeding, hoeing, forking land for cleaning, setting mangold and potatoes, haymaking, binding in harvest, and even spreading manure. Crow keeping is very bad, as making every day alike.

Those parents that keep their children longest at the school, and by pinching themselves, are generally depositors in our coal club. We have 80 in the village saving, some *1l.*, some *10s.*, and upwards, and 16 in the Tenmile bank. It is easier, of course, since they first began; they get *1s.* for every *5s.*, and the best coals at the merchant's price.

I have, &c.
W. J. Parkes.

J. Edward White, Esq.

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95. DOWNHAM MARKET.

Population about 3,000. Acreage - 2,500.

(One common gang, mixed. Number from 20 to 30. Ages from 10 or 12 upwards. Another gang on the borders of the parish. Extracted from Return.—J. E. W.)

(13.) From personal observation I am of opinion that the gang system acts most injuriously upon the education and morality of the neighbourhood. I have received most of the information given above from the man who employs the gang. Children are often sent into it when they ought to be at school; and the young women employed, although they may be virtuous at first, soon become corrupted by associating with prostitutes. The language used is most obscene when going to and from their work. (Here follows a statement of distressing facts which have come under

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the notice of the writer as a clergyman.—J. E. W.) As long as the present system prevails *prostitution must increase*.

(Here follows a notice of flax mills lately established in the town.—J. E. W.)

I am of opinion that children should on no consideration be allowed to work either in the gang or mills under 12 or 14 years of age; that a man should superintend the men and boys when working, and a woman should have the charge of the young women and girls. Also that such superintendents should have a certificate of character, signed by the clergy and churchwardens of the parish, and countersigned by a local magistrate; much of the evil which now exists would be remedied; and if the children were compelled to go to school upon the half-day system at least, a step would be taken in the right direction.

I have mentioned only one gang as belonging to this parish, but gangs from other parishes work in this.

E. C. K. Bearcroft,
Curate of Downham.

96. DOWNHAM MARKET.

(13.) It is conducive to health, but depraves the morals.

(A. J. Mackintosh, M.D.—J. E. W.)

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97. STOW BARDOLPH and WIMBOTSHAM.

Population: Stow, 1,100; Wimbotsham, 600.
Acreage: Stow, 6,127; Wimbotsham, 2,015.

(Two gangs. Now (May) 18 males, 42 females. Sometimes more; in winter much less. Extracted from Return.—J. E. W.)

(13.) The system is bad; favoured, indeed, by respectable farmers from its convenience, and *necessity* as they have come to think, and not likely to be altered except by authority.

Geo. H. Dashwood,
Vicar of Stow and Rector of Wimbotsham.

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98. FINCHAM.

Population - 850. Acreage - 2,890.

(1.) There are two gangs; one under a regular gangmaster, and is for general and public use in the parish and neighbourhood, the other private.

(2 and 3.) (Number varies from 20 in winter to 40 or 54 in summer; 42 in public gangs, 12 in private; boys, girls, men (few), and women. Extracted from Return.—J. E. W.)

(13.) If the sexes were separated and the gangmaster licensed, and hours limited, the system would not be so objectionable. But I do not see how a half-time system could be adopted where work so much depends on weather.

W. Blyth,
(Rector and Rural Dean.—J. E. W.)

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99. SWAFFHAM.

Population - 3,500. Acreage - 7,431.

(Two gangs of children, boys and girls. Probable number varies from 50 to about half. Probable ages, 9 to 16. Extracted from Return.—J. E. W.)

(5.) One gang often goes out of the parish to distances of four or five miles from their home.

(6.) Usual from 8 to 6 in summer; from 8 to 4.30 in winter. *Occasionally* from 6 a.m. to 6.30. (Then half hour for breakfast.—J. E. W.)

(10.) Not injurious when the distant work is of rare occurrence, but injurious to the young children when the distant work is frequent, especially if the quantity or quality of the dinner is insufficient, as it often is.

(11.) They could generally learn to read and write if the parents made them use the opportunities they have, and the greater part attend the Sunday school.

(12.) The worse for the admixture of boys and girls in the field.

(13.) I believe that if the gang system were confined to male children, and if it were regulated as to the distance they may be taken, and if care were taken as to the character and conduct of the gangmaster it would be beneficial to the employers and to the boys equally, enabling them to earn wages without which they can hardly be maintained by their parents, and helping importantly in training them to be efficient in that state of life to which it has pleased God to call them.

Not so in the case of the girls. The mixture of sexes, under the most favourable circumstances, is injurious to decency, and consequently to morality; and if the proper calling of the girls is hereafter to guide the house and be good wives and mothers, field work is the opposite of good training for it; but the parents WANT the wages.

[Here follows an opinion that gangs containing adults " are polluting and demoralizing " in the highest degree to every member " of them, and in these respects most in- " jurious to the community of which they " form a part," with reasons for this opinion. —J. E. W.]

Salisbury Everard, Clerk,
Vicar of Swaffham,
(and Rural Dean.—J. E. W.)

100. SWAFFHAM.

The statistical part of this will be better answered by the vicar of the parish and others on whom Mr. White during his recent visit left similar papers, but for the furtherance of the object in view may I take leave to give an extract below from my annual Report, addressed to the magistrates of this division, dated October 27, 1858, and which was circulated by the leading local journals of the county.

Extract.

" I may mention that the *mixed gang system* which prevails in our rural districts has a most demoralizing tendency. In support of this assertion we need travel no further than the sister employment which engrosses my attention, the union poor house situated in this parish. There there have been as many as five and six single girls in the house, not an extensive population, at the *same time* from *one* parish in or near which this system prevails, for the purpose of being confined, and this not with the first or second child either. Now what can be expected from the progeny of such mothers, more especially when their very offspring are permitted to herd together in these baneful gangs, with no other supervision than that of a slave-trading leader, whose conversation and example is *anything* but what it *ought* to be.

" If we must have the 'gang system' (and there is no reason why we should not), let not the *sexes* be *mixed* at this early age, and let respectable men be over the boys and respectable women over the girls. If this *mixed* system is allowed to prevail we shall soon lose sight of the purity of our female population. Surely something might be done in mitigation of this evil, seeing that so many of our criminals are drafted from this class."

After an experience of 13 years I beg leave to endorse this opinion (under date October 27, 1858) with the exception of one point, and that is, that I would exclude (if possible) *females* altogether from *field work*; they lose zest for domestic comforts through it, and in many instances render their homes anything but happy to their relatives.

I have, &c.
Bircham Houchen, A.M.,
Chaplain, Swaffham County
House of Correction, and
Union Poor House.

Swaffham,
December 7, 1865.

101. NECTON.

Population - 960. Acreage, near - 4,000.

General Observation as to the Gang System.

Soon after this system originated and gangs went oftentimes from their own to other parishes, and the farmers cared not who were appointed *masters*, so long as the work on their several farms was wanted to be done and was well executed, nothing could be worse than the language and conduct of the poor children employed in these gangs; and masters were, many of them, well content that it should be so. But the cry in course of time rose up in the country against the devilry that became a distinguishing feature of the system, as it was seen that the poor children, sometimes mixed up in large gangs with adults of both sexes of wretched characters, were witnesses in the leisure hour and at returning from work to such scenes as must break down all religious and moral sense of Christian duty in their hearts.

Magistrates spoke seriously to farmers and parishes on the gravity of the case, and by degrees some improvement has been made in the system. But it must be obvious that there ought to be some right and ruling power as to the appointment of masters or mistresses of gangs, as upon the purity of their character so much must depend for good or for evil to the children.

W. Mason, Lt.-Col.,
J. P. and Dep. Lt.,
County Norfolk.

102. Observations of the Rev. W. H. Walker, Rector and Vicar of Necton.

This circular, forwarded to me by Mr. White, Assistant Commissioner, Children's Employment Commission, has been filled up by Lieut.-Col. Mason, one of my churchwardens. I wish, however, to record my dissent from one or two of the worthy colonel's remarks. By an oversight he has stated that only one, and that a child's gang is employed in this parish. At certain seasons, such as the wheat sowing season (now just over) a mixed gang, consisting of men, women, and children is employed on all the farms. I have seen more than 30 together on these occasions.

From what I have seen and heard I have good reason for believing that *very bad* language is often spoken, not only in the hearing of the children, but by the children one to the other. The old man who is gangmaster can have but very little control over the language, &c. of the children. Colonel Mason says "no harm seems to arise from the employment." I beg his pardon. He does not see so much of this as I do of necessity.

In the present employment of children of tender years much harm results. The children so employed scarcely ever come to school. When at school they are the worse behaved of all, and do harm rather than receive good from mixing with the other children. By going with the gangs they learn much that is evil, which is not easily eradicated in after life.

My remedy for this would be. Do not allow any child under 12 years of age to go in the gangs: Let the gangmaster be approved of by the clergyman of the parish, and be *under some control. Keep the sexes apart.*

William Henry Walker,
Rector and Vicar of Necton.

103. GREAT CRESSINGHAM.

Population - 531. Acreage - 2,374.
1,916 arable; 388 pasture; 70 wood; 52 glebe.

(1 and 2.) There is one gang in this parish composed of young girls and boys (from 9 years upwards; mostly girls, no boys now (October); only two last summer.—J. E. W.) The gang system has only been established here within the last 11 years. The number varies from 30 to 11, according to the season and demand.

(5.) Sometimes between five and six miles; sometimes a mile, or three-quarters. On very wet days they do not work, but they are often wet through with rain and dew.

(6 and 7.) (Work from 8 a.m. till 4 p.m., with half an hour dinner, or till 4.30 with an hour. —J. E. W.)

(13.) Whatever good instruction a child has received at home or at school is lost in a few weeks, and the child becomes bold, saucy, demoralized, and intolerant of restraint and advice. I know an instance where the mother asked her child after the first day's work in the gang how she liked it, and the child replied, "I like the fields, mother, but I have heard words "I never heard before." No child should be allowed to work in gangs before 15 or 16 years of age.

Charles Taylor,
Rector of Cressingham Magna.

P.S.—The gangmaster, I am told, receives 7*d.* a day for each person, and pays 8*d.* for the eldest, say 22 years old, and the best, and to others 7*d.*, 6*d.*, 5½*d.*, 4*d.*, according to age, so that it is his interest to get children to join the gang as young as possible. The most of the girls ages vary from 11 to 18 now; there are younger than 11, and most but a little more than 11.

104. ASHILL.

Population - 696. Acreage - 2,990.

(Two gangs, mixed; number 65; majority adult females, rest boys and girls. Half as many children in winter as in summer. Extracted from Return.—J. E. W.)

(5.) Occasionally to distances of five miles.

(12.) Bad; and in the case of those exclusively working in the gang, very bad.

(13.) The gang system, as at present in operation, is deemed by all thoughtful persons, and even by most of the parents of the young people, to be in the highest degree injurious to their morals.

(From Rev. B. Edwards, Rector and Rural Dean. —J. E. W.)

105. SAHAM TONEY.

Population - 1,285. Acreage - 4,040.

(Two gangs; aggregate number about 40; somewhat more males than females. Ages mostly between 13 and 18. Extracted from Return.—J. E. W.)

(5.) They go all distances within seven or eight miles.

(10.) Injurious, to young females especially, from the work being often so far off and continued so long; and from exposure to bad weather they receive much harm.

(11.) Their state of education is very bad. They seldom attend school, and forget what they once learnt.

(12.) Their moral condition is generally still worse. Their manners, their language, their general conduct bear witness to the demoralizing effects of the system under which they are employed.

(13.) It may be difficult or impracticable, or at all events inexpedient, to abolish the system altogether, but it may apparently be much improved by being put under proper regulations.

I would suggest that such gangs should not be worked except by persons who have a licence from magistrates at Petty Sessions for such purpose, signed by certain of the principal persons in each parish, as the clergyman, the churchwardens, and overseers.

That males and females under 18 years of age should not be allowed to work together.

That no boy be permitted to go to such work before 10 years of age, and no girl before 12.

W. H. Parker,
Rector (and Rural Dean.—J. E. W.)

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b.

106. THREXTON.

(Letter No. 1.)

Threxton, Watton,
29 June 1866.

Sir,

Your circular respecting the gang system duly came to hand. * * * There is not a gang in this parish, but one is occasionally employed from the neighbouring parishes of Saham or Watton. They seem to become *necessary evils*, but might with proper management and discipline be much improved. I think no objection could be taken to the employment of boys, but I have a most decided opinion that the employment of girls in field labour is attended with the worst results; besides which the consequence is that domestic servants are every year, from this cause, more difficult to obtain, for when once employed in the field they seldom care to be under the control of the mistress of a house. * * *

I have, &c.
Thos. Barton.

(Letter No. 2.)

Threxton, Watton,
13th July 1866.

Dear Sir,

What I meant by "proper management and discipline" was this,—that boys and girls should not work together, and that the gang master ought to be a sober and well-conditioned man, which, as far as my experience goes, is not generally the case. As I stated in my last letter, I am of opinion that girls should not go to field work at all, and for the reason then stated. But here comes the question, What is a poor man with a large family to do? They must be clothed and fed, and consequently must earn something as soon as they can. It is a difficult matter to interfere with free labour in a free country. * * *

Yours, &c.
Thos. Barton,
J. P. for Norfolk.

J. E. White, Esq.

107. MERTON.

Population - 197. Acreage - 1,344.

(1.) There is no gang in this parish, nor do any of our people work in gangs, though they are largely used by our farmers. The statistics of these gangs could best be obtained in the parishes from which they come. The only approach to the system which we have among our own people is where a labourer is occasionally put over six or eight boys, he directing the work and seeing that it is done properly. These boys are paid by the farmer, and this way of getting work done is unexceptionable.

(13.) The gang system is a necessity in the present state of agricultural labour, so that all inquiries should be directed to ameliorating the system, and not to doing away with it. As it at present exists it is a very great evil, and tends to gross immorality, and in the case of very young children to some cruelty through overwork. I should myself think it desirable that no children of either sex be employed as paid agricultural out-of-door labourers under 10 years old. This may seem too early an age, but it must be remembered that unless boys begin to work while very young they very seldom become good labourers.

I think the suggestion a good one that the gang master be licensed by the magistrates of the district in which he lives, and I think he should be obliged to obtain the recommendation of two or more respectable householders. I consider it very important that the two sexes should not work in the same gang. I think there should be, if practicable, in the case of children under 13 years old some limit to the distance they must walk to their work. I do not consider the present hours of labour, from 8 till 4.30, with half an hour for dinner, as excessive, assuming that the children do not begin to work till they are ten years of age.

George Crabbe,
Rector of Merton.

108. BRECKLES.

Population - 130. Acreage - 1,506.

(A gang of 35 boys and girls, or in winter 16, is stated to exist, but from the population must, it seems, belong mainly to another parish.—J. E. W.)

(13.) Bad for the children as regards education and morals; useful for the employer; under regulation might be tolerable.

(Form addressed to Rev. W. S. Thorpe, Vicar.—J. E. W.)

109. WICKLEWOOD.

Population - 660. Acreage - 1,630.

(1 and 2.) * * * Only one gang at present; 40 or 50, who work more or less in the gang. Number employed at one time varies from 4 to 36.

(13.) Few except the very lowest of the agricultural population engage in gang labour. It has a demoralizing and debasing effect upon the young, who learn evil from evil companions, and soon acquire a preference for the licence of gang life over the restraints of regular service. The boys grow up into ignorant unskilled labourers; the girls rarely go to service, and almost invariably turn out indifferent characters. It thus deepens and perpetuates degradation.

The above answers and remarks apply solely to the employment of women and children under a gang master, not to cases in which they are hired directly by a farmer. Children, especially boys, are occasionally employed by farmers at as early an age as 6 years. This puts too early a stop to their school education, but is free from the most pernicious effects of the gang system.

Six years ago I should have been obliged to return much less favourable statistics upon this subject than those I have now given. There were then three gangs in this parish, with a total average of about 50 workers, comprising a much larger proportion of children and unmarried females. The present improvement I regard as merely accidental and temporary, and not as due to any permanent causes.

(Form addressed to Rev. W. Acton, Vicar.—J. E. W.)

110. (i.) KIMBERLEY and (ii.) BARNHAM BROOM.

(i.) Population - 112. Acreage about 5,000? (Statements vary).

(1.) One gang, chiefly from the adjoining parishes of Wicklewood and Hackford.

(2–10.) (Number 10 to 30. Young boys, girls, and women. Distance one to four miles. Hours of work (usual) eight in summer, seven in winter. Sexes work together.—J. E. W.)

(13.) In the present state, especially of a growing migration of young men to other parts of England, such gangs seem to be almost an agricultural necessity; but if the sexes could be kept separate, and if no *young girls* were employed in those gangs where unmarried women with bastard children work, it would be a most desirable change; as, besides the injury to their morals, they are unwilling afterwards to enter service, and thereby exchange their previous independence for the ordinary and wholesome control of masters and mistresses.

(ii.) With regard to this parish (Barnham Broom) gangs are seldom used; but when they are they come from other parishes as Wymondham or Wicklewood, and are of much the same description with that mentioned in the above account, which is, I believe, a fair sample of the gangs in the district.

Mr. ——, a large tenant farmer of the Earl of Kimberley, in the adjoining parish of Carlton Forehoe, has a gang of *boys only* about 12 in number chiefly from this parish, and under a labourer living in this parish. These boys vary in age from 9 to 15, and in payments from 2*s.* to 3*s.* 6*d.* or so. Except that the boys are taken away too early for *their education*

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from the day school this gang is, I think, a real benefit, as it trains and hardens the boys for their future work, and enables them to earn something for their parents. Our evening school, about four months in the winter, does something for these towards *an approximation* to fair education, suitable to their station.

Edward Gurdon.
(Rural Dean. J. E. W.)
Barnham Broom Rectory, July 27, 1866.

111. EAST HARLING.

Population - 1,109. Acreage - 2,536.

(1 and 2.) Persons are extensively employed in gangs in this parish. 61 males, 66 females. (Include 24 males over 18 years, 18 females over 18 years; nearly two-thirds of the boys and girls under 13.—J. E. W.)

(5.) The distance varies from one to* nine miles.

(6.) Eight hours on the land when at a distance from home, 9½ when near. 12 hours.

(7.) Half-an-hour at breakfast, two hours at noon.

(9.) In some few gangs separately, but generally together.

(13.) It is not expedient to put down the gang system for many obvious reasons, but it has been suggested by a parishioner fully competent to form a correct opinion upon such a subject that every master of a gang should be compelled to take out a licence specifying his duties and rendering him liable to a withdrawal of his licence if at any time convicted of a breach of those regulations.

There are 10 parishes in the deanery of Rockland in which children are employed either in private or public gangs.

Would it not be desirable to enforce a certain attendance in the parish schools?

Thos. B. Wilkinson,
Rector of East Harling and Rural Dean.

112. KENNINGHALL.

Population betwixt 1,300 and 1,400. Acreage, 3,524.

(1, 2, 3.) Three gangs. From 70 to 80 in summer; from 30 to 40 in winter. From 10 to 60 years of age (boys, girls, women, and a few men.—J. E. W.)

(6.) Males from 6 till 12 at noon, and from 2 till 6 in the evening; females not so early.

(7.) Half-an-hour at breakfast, two hours at dinner.

(9.) As the case may be.

(11.) Sunday schools; day and evening.

(12.) Thoughtless, no doubt, some at times, but generally good.

(13.) Very useful and beneficial.

(Form addressed to Rev. R. Procter.—J. E. W.)

113. BURSTON.

Population - 400. Acreage - 1,200.

(1.) There is one gang composed of young persons from the parishes of Burston, Gissing, Shimpling, Diss, and the Thelveton, conducted by a Burston man.

(2.) (Number from Burston varies from 13 to nothing; boys, girls, and women, working together.—J. E. W.)

(6 and 5.) From 8 a.m. to 12, and 2 p.m. to 6, time of going and returning not included. Two miles at the furthest.

Sir,

I have the honour to return the enclosed form. It will be observed that the gang system does not prevail to its fullest extent in this parish; there are, however, besides those who work in the gang many children and some women employed in agricultural work, and the demand for these is increasing in consequence of the diminishing number of young men. I do not thing that work in gangs is more injurious, as conducted here, than other field work, but the master of our gang is a respectable person and will not allow any filthy or profane talk.

The consequence of the demand for children's labour is that it is scarcely possible to keep children at school beyond eight years old, and with a population of 400, and a school in winter of more than 40 scholars, I had yesterday (1 May) only 18, and those little more than infants, and I shall be as deficient for at least two months more. There are, however, more children absent with their parents than in the gang.

Agricultural labour generally unfits the girls for service, and much interferes in the case of married women with the tidiness and comfort of their families.

I may observe shortly that as the system is practised here I see nothing worse in the gang system than in any other system of agricultural labour for women and children. I should, however, be much rejoiced if any legislative enactment could be passed by which in the case of children under, say, 12 years old the hours of work could be shortened and so arranged that some time could be given for education.

I remain, &c.
H. Temple Frere.

114. SHELFANGER.

Population - 400. Acreage - 1,700.

(1, 2, and 3.) A small gang is formed in spring for dropping seed and stone picking. 11 this year (viz., 1 boy under 7 years, 1 girl under 7 years, 5 girls between 7 and 13, and women.—J. E. W.)

(5.) Two or three miles at most.

(6 and 7.) From 8 a.m. to 6 p.m. Two hours.

(13.) In this parish the gang being so small and only in the spring is comparatively harmless. I do not even attribute the low state of education to it, but to the recent date of the school.

I have, however, had charge of parishes in which the gang system is a comple *curse*, the ruin of education and morality, and where no respectable female cared to meet a gang on the road.

Clement O. Smith,
Rector of Shelfanger.

115. WINFARTHING.

Winfarthing Rectory, Diss, Norfolk.
April 28th 1866.

As Mr. Carver's representative in this parish, I beg to state, in reply to the Circular and "Form" issued by the "Children's Employment Commission," that what is termed the "gang system" does not exist here, though field labour for children of both sexes and of all ages, as also for women, is in almost constant operation. In the majority of cases, speaking of the labouring class, immediately a child, boy or girl, can earn twopence a day in the field, thither it goes as often as employment offers, which is a great portion of the year, with brief intervals. In the autumn they are engaged in the wheat setting (followed by "crow keeping,") and pulling and cleaning turnips and beet. Even in the "dead of winter" small boys are employed in keeping rooks from the stacks. In early spring boys, girls, and women "go dropping" (*i.e.*, assist in planting) beans and peas. The former afterwards "keep crows" off the same, as also off the young barley crop, which immediately follows. Stone picking comes next, succeeded by "singling," *i.e.*, thinning beet and turnips. An interval of a few weeks, and harvest arrives, when women and big children again work in the fields; smaller ones run to and fro with dinners, &c. Then comes the gleaning season, followed by "keeping of pigs" in the stubble. In a week or two after "wheat setting" comes round again. This is a brief sketch of the routine of labour for women and children in an ordinary agricultural village. The hours they are occupied vary from 8 to 12; they are often thrown

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* Seems to include both journeys. No reply has been received to a question by me on this point.—J. E. W.

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together promiscuously without regard to age or sex. Early exposure to "all weathers," often sows the seed of disease and premature old age with its concomitants. Education is greatly impeded, and the moral condition, especially of females, greatly deteriorated. Girls who have for any length of time been employed in field work seldom go to service, in fact in the majority of cases they cease to be girls in everything but sex.

Francis Humphrey,
Curate of Winfarthing.

116. KIRBY CANE.

Population - 450. Acreage - 1,475.

The old law of settlement led to pulling down of cottages on close estates, and consequently farmers had to apply to open parishes, such as——, where gang masters found the labour required for particular reasons. The consequent state of morals and degradation is fearful to contemplate (*vide* former Report of Commissioners). The gang system does not exist in my district.

Abbott Upcher, Rural Dean.

Suffolk.

117. *Letter from the Rev. C. Drage.*

The Rectory, Westerfield,
Nov. 30, 1865.

Dear Sir,

The horrid gang system of men, women, boys, and girls exists in this parish, and happy will it be for the morals of the poor if the Government should prevent it; but the great evil is the crowded lodgings or dwelling-places.

Yours faithfully,
Charles Drage.

(To Rev. W. Howorth,
Rural Dean.—J. E. W.)

118. *Another Letter from the same.*

Westerfield Rectory,
Nov. 15, 1866.

Sir,

You are at perfect liberty to make use of my letter to Mr. Howorth. I am still of opinion that the cottages of the poor, containing as they do many of them only one sleeping room, tend to demoralize their inmates, old and young, more than the gang system does the male and female children who work in them.

The farmers might mitigate the evil by separating the gangs, and giving lighter work to the females; at all events, do you not think that a legislative enactment would be wise to prevent girls working in the fields before they are 10 years of age?

The gang system brings the parents an additional weekly sum, and I believe as the children themselves are not averse to working together, it will be difficult to put an end to it without the interference of the legislature. I should have answered, sir, your circular in April, but I could not get the numbers employed in the fields.

Yours obediently,
To J. E. White, Esq. Charles Drage.

119. *Letter from the Rev. F. G. Holmes.*

Denham, Wickham Market, Suffolk.
12 Jan. 1866.

Dear Sir,

In reply to your letter of the 15th ult. I beg to enclose the answers to the questions which you forwarded to me.

This is only a very small parish, with a population of some 300, but the evils of the gang system as it prevails here are great. The gangmaster is addicted to drinking, and often leaves the children by themselves in the field, or under the orders of an older boy, while he is gone off to drink in the public house. He swears at the children, and they catch up his oaths and use them to each other. I have seen the children on a Saturday evening waiting outside the public house until the drunken gangmaster should come out and pay them. I have seen the boys of the gang, during their dinner-hour in the field, bathing in a pond, while the girls were sitting round on the bank. Need we be surprised at the low tone of morality which prevails amongst them? The parents of the children themselves, at least the more respectable of them, speak in the worst terms of the evils, moral and physical, which attach to the system; but the wages of labour here are very low (9*s.* per week), and the parents are almost compelled to make use of their children's labour, and the easiest way of doing so is by sending them into the gang. Hence the school is forsaken, often before the child can read or write, and is seldom resorted to again, at least not with any regularity.

I remain, &c.
J. E. White, Esq. F. G. Holmes.

120. *Mr. Charles George Read*, surgeon, Stradbroke.—I have been in practice here nearly 20 years, and am surgeon to the Strabroke division of the Hoxne union. In the parishes in this division, and others in the neighbourhood, the practice of employing gangs in field work is general. I have noticed it more of late than formerly, say within the last 10 or 12 years; this may be either from the practice having become more common, or from more attention having been given to it of late years. I am not aware of farmers keeping private gangs or sets of their own in this neighbourhood. Men often take to keeping a gang as a means of making a living when they have become partially disabled or unfitted for general field work; I have observed this in the case of men who have been under my care as pauper patients. When a man has a gang he does not appear to be in a better position than a common labourer, so far as one can judge from his outward circumstances; they do not improve.

Most of the children in the gangs are as much as 10 or 12 years old, but in some cases I should say that they begin as young as 6 or 7; I judge so partly from the case of a widow here, whom I have employed, who was told by the relieving officer that she would not be able to get relief much longer, as her children would soon be old enough to work in the gangs.

I do not think that gang work causes any injury to the health, but it does to the morals. Big boys like going in the gang because of the girls, and big girls like it because of the boys. The freedom of the work is seductive to girls, and seems to fascinate them. When once they have taken to being afield, they cannot be got to stay in service. It is decidedly important that the sexes should be kept separate. I do not hear of any ill-treatment of the children by the gangmasters.

A great many people have migrated from this parish in the last few years; the wages are so low that they are glad to go. One thing which is found in this neighbourhood seems very hard and mischievous also, which is this: farmers often pay young men who are single less than the standard rate of wages, and will not employ them otherwise. It is not that the men with families are paid more than the standard, but that the others are paid less. The standard is fixed on other grounds, and is well known.

121. *Sarah Ann Cook*, gangmaster's wife.—My husband took the gang when his father-in-law died, who had it before. I do not remember more than one in the place. Two or three men have tried to set up a gang, but said that they could not get on with it. Farmers have tried having one gang of children for them all under one of their own men, but it was disagreeable, because they all wanted it at once. Then they said that they would try having children by themselves, but found it too troublesome; children trample the corn so. My husband has now over 30; the girls from 7 to 14 years, and the boys from 7 to 12. Last year he had from 20 to 25. He would not take them younger than 7. There are smaller children out this year than there have been before; I suppose because people are badly off, and glad to get them out; it has been a trying long winter. There are a great many of them so small that the farmers call out about the wages. There are now only five or six girls. One lad is 17 or 18, whom the

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farmers won't employ; he wants more a day than they like to give him, though he is a big chap, and handy. There 's a great many young chaps standing about, though there is plenty of work to be done; but it seems the farmers have not enough money to pay them. My husband can't afford to give them more than 9*d.* a day at gang work; if he did the farmers would grumble.

He takes children at first as learners at 2*d.* a day, and does not press them, and heightens them 1*d.* each year, sometimes twice in a year, if they are fit; or it may be they get $2\frac{1}{2}$*d.* or $3\frac{1}{2}$*d.*, according to what he thinks they do. If from the wet they work only a quarter of a day, they get paid accordingly. Those that get 5*d.* a day get $1\frac{1}{4}$*d.*, and 3*d.* ones get a halfpenny. That ain't much to get wet for, is it? He himself is generally paid by the day, and gets 1*s.* 10*d.*; labourers, *i.e.*, if married, get 1*s.* 8*d.*, or 10*s.* a week, but if they are single they get only 9*s.* They say corn is heightened to-day; if so he will have to be heightened to 2*s.*

Flax pulling is almost as good as a little harvest like; women then get about double, or 1*s.* or 1*s.* 2*d.*, and the children are heightened 2*d.* or 3*d.* a day. They work then from 6 a.m. till 7 p.m., with an hour and a half for dinner, and half an hour at 4 p.m. At that there are more big lads and men and women. The right small ones can't manage much of it; still he puts them to it to learn it.

At other work they start usually at 7.30 a.m., or if they go far, at 7, so as to begin at 8. One place is two and a half or three miles; but when they go there they are sent for in a waggon, because it is too far to walk and work all day; they are sent back or not, as it happens. Another village to which they go is three miles. A chance time they have walked that, but my husband says he won't do it, because of the fatigue. It makes the children so wonderful tired, and they can't work. The farmers offered to fetch them because they want them so bad.

I don't like girls in the fields; it is ruin to them; they get so wet, especially now in summer, and get such bad colds. They get quite wet through, and I have to change them. My eldest girl is a very poor sickly thing, and has had such bad ankles. In my opinion it is from going on the land; and my husband, too, thinks it is from getting wet. Some others get bad ankles too, but it's according to the constitution; if they are strong they take no harm. It has been wet all day to-day, and I thought wet enough to knock them off; they are not a great way off. But perhaps they have been singling beet, which is not so wet as other work. My children were out yesterday only a quarter of a day because of the wet. The girls had to strip. Boys can get into a hedge where girls can't get.

We have just got my eldest girl, now 14, a place in service, and she gets 9*d.* a week, and I wash for her. When girls first go out at that 6*d.* or 9*d.* a week is the most that they get. She began in the gang at 10 years old; another girl at 9; and Emma is now out at 8; William began at 8.

The gang come here to be paid on Saturday night, and keep coming and going from 7 till 9 p.m. My husband is not good scholar enough to write, but he puts them down by different marks, *e.g.*, a cross mark for the 4*d.* ones, of whom there are a good many; but he has been to the night school and learned to figure a little, and what he can't make out Emma can; she gets to read and write nicely.

122. *Mary Aldous.*—Two of my girls went in the gang when about 8 or 9 years old, at 3*d.* a day. They worked from 8 a.m. till 12, and from 2 till 6, and in winter till 4. They reckoned to have two hours at dinner. If the man took the work they wouldn't stop the full time; if it was by the day they would. Of course if girls won't go to work they must have a flogging as well as the rest. The man had a strap, but not to hurt any; they did not complain.

They used often to get wet, and have come home from beet pulling wet nearly up to the neck. Corn is the wettest.

Two of my boys are on a farm with the stock; the youngest 10 years old. He has to go Sundays and all, at 4*d.* a day, or 2*s.* a week, and gets his dinner at the farm house on Sunday. On Sunday morning he comes home at 8 for breakfast, and goes to school from 9 till 10, and then back to work. He has to wait after 6 p.m. to put the cows out, and does not get back till about 7, the same as other days. His master always likes boys go to school like this.

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123. *Harriet Cook*, Horham.—This is the fourth year that Agnes and Frank, two of my children, have worked in the gang. Agnes was 7 when she began, and got 2*d.* a day; Frank was 6, and got $1\frac{1}{2}$*d.*; he has been heightened $\frac{1}{2}$*d.* each year since. They usually start from home at 7 a.m. Most of the places where they work are near, but when they go to two parishes which are a good distance they start at a little past 6 a.m.; going so far tires them; gangs are never sent in a waggon about here.

They have not made more than three or four whole days' work in the fortnight for a long time past (June). They get paid once a fortnight. When it is wet they can only make parts of days, and now and then make rather more than a day. Yesterday they went at 7 a.m., and came back at 10.30 a.m., or nearer 11; that counted a quarter of a day. To-day they went at 7, and came back at 11 a.m., or a little past. They went again at 1, after dinner, but did not get to work at all because of the wet, and got back between 2 and 3. I asked whether they had made a half day by this, and they don't know; they expect they have. The man takes the work by the acre. The gangmen won't give more than 5*d.* or 6*d.* a day, so nearly all in the gang are children; people over about 14 years old won't work for that.

This gangmaster is very quiet and steady. —— (another) was such a swearing man, and never spoke hardly without an oath in his mouth; he was not at all a fit person to take children out; and had a very bad temper. He had been affected with the rheumatics, and on the parish three or four years. He never had above 14 in his gang.

The first job that ever that boy (Dennis, aged 12,) did was keeping of birds; he wasn't more that 6 years old, I think. (Dennis, "I can't recollect.") They keep birds at two times of the year, wheat seed time and spring. In spring they go at 6 p.m., and are not home till late, viz., 8 or 7 p.m.; sometimes they are out from 5 a.m. till 7.30 p.m.

I have been a widow three years, with seven children, six of them at home. I am favoured in my cottage, paying only 9*d.* a week. You may think it tidy now, as you say, but it was very untidy. Next time I pay my rent I think I shall keep the money to mend the window; it has been broken like that a twelvemonth. The man says it is the tenant's place to mend windows, but I say the panes (several small panes gone, lead and all) were blown out for want of being leaded.

These three children can all read. The school has been shut a year; I am very sorry.

124. *Agnes Cook*, age 10, daughter of above.—When we go a long way we have to begin work at once when we get there, without resting first. We leave off at 6 p.m. There are 29 of us now, all from this parish; about 20 of them girls, the eldest 14; the eldest boy about 12. The other man used to have a stick from the hedge and flog us, and hit the girls as well as the boys.

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125. *Ellen Pearl*, Monk Soham.—My girl Alice went dropping beans with her father up beyond Kenton, towards two miles from here, when she was 4 years old. We particularly marked that, because he had to carry her when she first began to learn. She left home with her father about 7 a.m., and came back about 5 or 6 p.m. You remember when you

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were a little dawdy* (dotty?) child, don't you? (Alice, "No.") They were not tied to a regular day, and might work till 7 p.m., or as it happened. She was so little that when left by herself she fell into the river (ditch), but we saw her in time and pulled her out. A good dibbler should have three droppers to work in a length. Alice was very quick, and would beat me altogether at dropping now that she is 13. She and I very often go with a machine at thrashing, and work from 7 a.m. till 6 p.m., but stay till we a kind of finish; if we are wanted, till 8 or 9 p.m. At that work they generally give us a trifle more, say *2d.* a day and beer. Sometimes there are other women and girls, but most are men.

She has kept birds, sheep, or cows, or anything that the farmer wants, Sundays as well as other days, with no more for Sunday, except, perhaps, dinner is given.

My brother-in-law has a gang of from 12 to 14 young children; he gets only *1s.* a day; he lost an arm by a steamer (engine). He hardly ever takes work by the acre; he did a little last year, but it made very little difference. His own little boy, aged 7 works with him, and another little boy, who I know is not above 5; I suppose that his mother would not compel him to go unless she were there herself, or his elder sister, who goes now. He gets *2d.* a day, others *2½d.*, *3d.*, *3½d.*, and so on up to *6d.*; *6d.* is the top price till you get to be a woman, and then *8d.* My brother-in-law has a stick; he could not get on without that; you must be the scare of them (children) when they first go out; it won't do to let them be master.

There are two gangs at Earl Soham, and some children from here go to work in them, but I don't let my girl go. It is so far, two miles off, and I don't like so many boys, and don't know what they do. I don't think that there is any blackguard talk at work, but it's the coming home I don't like. I never let my girl go in a gang except with my brother-in-law.

At harvest if a man takes the work he finds the gavellers, *i.e.*, workers to rake up, &c.; if he goes by the month the master finds them. At gavelling, or when we go behind the waggon, *i.e.*, at carting, we sometimes work till 9 or 10 p.m., though we do not go to work till 7 a.m., they beginning without us. At harvest they generally give us double wages.

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126. *Martha Turtill*, gangmaster's wife, Earl Soham.—My husband has taken out a gang for eight years; he is crippled. He has from 30 to 36, chiefly children from 7 or 8 years up to 13 or so. They meet on the green, and start soon after 7 a.m., and work till 6 p.m. They begin as soon as the weather will permit, about March or so, and most of the work leaves off in October. Those who go in winter start about the same, because they cannot work so late. My husband don't let them go out so much in the wet as some do; he can't stand it himself. I know that it never used to do us any good. When I went in a gang we used to get wet up to the waist.

At stone picking my husband can't carry off the stones himself; he is obliged to have two or three carriers. The biggest and strongest girls carry the stones in skips on a yoke. He takes stone picking at *7d.* or *8d.* per load, but for other work he is paid by the day.

127. *Letitia Warner.*—I have a girl aged 9 and a boy aged 7 in the gang; the first year for both. I ask the gangmaster whether he will take them. They generally start at 7 a.m., leave work at 6 p.m., and take dinner with them, and get *3d.* a day each. There are others in the gang as young as my boy. They carry stones in a skip which holds half a peck, and buy it for *4½d.* I have heard say that I got *1½d.* a day when I first went to work at Ashfield, but cannot say how old I was. I can't say whether my boy is in the A B's or what he reads; the girl can read.

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128. *Rev. W. Page Roberts*, vicar of Eye.—I have seen the working of the half-time system of education in a large manufacturing town where for nearly three years I held a cure. Some modification of the same system would be a great benefit if adopted in agricultural counties. Of late, from finding the numbers of persons who have come before me as candidates for confirmation unable to read,—from the ignorance displayed by those who seek admission to the night school, and the sadder cases of those whose age makes them ashamed to come to the night school,—I deeply feel the necessity for compulsory education. Between the ages of 6 and 10 parents should be obliged to send their children to school *whole* time, and between the ages of 10 and 12 half time. As there are special seasons when the labour of children is the more necessary, half time should mean a fixed number of weeks each year. Compulsory education is as necessary and as justifiable as compulsory vaccination; both are preventive measures. Ignorance and a low mental state are as much a disease as any bodily disease.

Penal consequences should enforce the law of compulsory education (or it would be nothing but an expression of Parliamentary opinion) both on those who employ the children in opposition to the law, and on parents who neglect them.

Children seeking employment should be provided with a certificate from the schoolmaster, showing that their names have been entered on the school registers; and a certificate could be given when they were 12 years old, showing that they had completed their education, and could be employed without restriction.

A Government inspector should each year examine the school register, whose special business it should be to proceed against offenders.

Gangmasters should be provided with a licence from the justices of the peace, renewable yearly.

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129. *William Salter*, gangmaster, Debenham.—I have been out with a gang 10 years, and have learned the trade well. It wants a man well acquainted with work, and with children too, to see that they earn the master the money. Children can work eight hours very well, and can do more in working eight hours a day than nine. In the last hour they are asking forty times what o'clock it is. Farmers have many times tried to get me to work till 6 p.m. instead of 5, but I told them that I never would begin it; it would not be any gain to them. I would not give a halfpenny for what the children do after 5. Whether the work is by the piece or the day, I know in a minute when they are tired. As to age, they are useful at 8 years, but it would be best for the children themselves to begin when they are about 10. Two miles is about as far as I go on the average; if we go further I take it out of the farmer's time, and if it is far off leave work at 4 p.m. One place is four miles off; they have sent a waggon for us for there. Walking is more tiring than working for the children. Wherever I go we start at 6.30 a.m. Sometimes we would take only half an hour for dinner instead of an hour, and leave work sooner.

If it is wet I manage as well as I can to save them. Children get cowed, and are no use at all if they get wet in the feet and about the legs. I have known girls get cold and faceache, &c. from it, and keep at home two or three days. We have been in long barley full on the ear; up comes a thunderstorm, and we have come out as wet as rats, and come home and stripped. Barley holds wet the most, it is very blady; so at this time of year (June) if it was wet and we were in barley, we should go into a piece of beans if we could. If the corn is very wet I should give them boughs off the hedge, one for each, to brush the wet off before them. Then I put girls in the furrows, and boys on the stetch. Then again, out of 24 or 25 children you are sure to have six or seven very badly shod; I always look out for these, and put them behind those who are well shod.

I never had to hide the children; I have seen enough of that. There was an old man who would knock them down with a hoe stick or anything. You

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* Or like Scotch "dawtit," *i.e.*, fondled? J. E. W.

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can do best with kind words. If any would not work I used to send them home. I never allowed blackguard language.

Stone picking is a very haphazard game. When I fall in with bad land, *i.e.*, where the stones lie thin, it is bad for the children and bad for me too. They have to go over so much more land and get tired. If it is good land we may leave two or three hours earlier. I count it very bad if you don't get a load off an acre, but many and many a time I have gone over 40 acres for about 30 loads, and have gone over 17 acres for 7 loads. With 20 workers I should expect about 25 loads. A load is 10 bushels and a bushel weighs a cwt. This year I had to carry them myself alone, and have carried off 25 loads, and some for long distances, *e.g.* 200 yards, but I will never do it again; it is not one man in ten who could do it; it made my shoulders quite raw.

Flax makes more work for us in a year than any crop. There is weeding it twice, hoeing, pulling when ripe, shocking, stacking, and beating or thrashing out the seed. At flax pulling one season I had as many as 55 working in a row. I could get any number of hands for that, because they are well paid, viz., women and bigger hands 1*s.* 6*d.* a day, and the little ones being heightened too a bit, *e.g.*, a 4*d.* child would get 6*d.*, an 8*d.* one 10*d.* or 1*s.* At that work I have had young chaps as good as men, *i.e.*, at 18 or 20. I paid away 9*l.* for the week's wages one Saturday night, and 30*s.* to the children of one family, two being young women at 1*s.* 6*d.* a day. Flax is a very paying crop, and from work which I have done myself I know that as much as 17*l.* or 18*l.* must have been got off an acre for stalk and seed. But as for the last year or two flax has had a blight, there will not be much of it sown here for some time, I think. I take a set of eight or nine big boys to beat or thrash the flax in a barn.

Flax pulling is hard work, and sometimes sprains the hands. Flax is wonderful bad stuff for the hands, and if a piece gets in it is a kind of poison to them, and festers them up; I have seen hands very bad from it. Most however have gloves. Pulling beet too is hard work.

At the fair I always made it a rule to be up right early, *i.e.*, have the hands up at 2 a.m. and begin at 3 a.m.; we cannot see before; we leave off then at dinner time. After the fair they want a couple of days holiday to get round. I have had big girls and boys take and topple down just like drunken people, and lie right down asleep, because they had not been to bed; it will be so when boys and girls get out.

Within the last fortnight I have just given up the gang because I could not get enough big hands; out of my 16 not above eight were fit for hoeing and the harder work. People are better off; there aren't so many here. Many big girls and boys have gone away to London and other places; only one big girl that was with me is in the parish now, I think; they have gone to service. At small places here they get only from 2*l.* 10*s.* to 3*l.* 10*s.* a year and that is what disheartened them so. But some got away and sent for others, and so on. The friends too like to keep the children at school more. Since I left off several have gone to school, at least they said they should. I used to be pressed by parents to take their children, and many a time have had to send away five or six. A man can't look after more than 24 or 25, or at most 30. If there are a lot of children they blunder round and stamp on the corn. I used to let one get in first, and then the others, like soldiers.

This year men have had to do the handweeding at 1*s.* 8*d.* a day, and since I have left off the gang I have been at weeding myself. A man must work hard to get over an acre in a day. With children I used to take weeding at 1*s.* an acre. Perhaps men would cost 2*s.* or 3*s.* an acre. Two 6*d.* boys or girls would beat any man at weeding. Children are shorter and haven't so far to stoop, and men can't stoop so long. I used to pay the hands from 4*d.* to 8*d.* a day each. I have known three regular gangs at once here. Mine was the last. Perhaps another year some old man may take some hands again.

130. *John Bickers*, age 15.—When I was 12 I went to work in a gang here of 25 or 30 boys and girls, and got 3*d.* a day, working from 7 a.m. till 6 p.m. In another man's gang (Salter's) we worked only from 7 till 5. Also I went flax pulling with mother for a man at a village near. He had two gangs like, one under him, one under his wife, and we were with either. Sometimes we were stinted. The woman used to tell us how many stetches to do, *i.e.*, mother and me together, and we worked harder then; we did not earn more, but we got home sooner, perhaps by half an hour.

Flax pulling is very hard, and if you don't look out you may strain your wrist, or if you let it slip you might run a piece into your hand.

On the fair day the gang always starts for work at 2 a.m. and leaves off at 12 noon, and this counts as a day. (Three other youths stated that this was usual. One afterwards put the hour a little later, *i.e.*, as soon as it was light enough, the fair being at Midsummer. —J. E. W.)

I have "taken" three harvests. I take one for five weeks at 6*s.* a week, to work from 5 a.m. till 7 p.m. with usual stops.

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131. *Mr. Hugh Cawley*, Helmingham.—I am agent for the Suffolk estates of J. Tollemache, Esq., M.P. This entire parish, with a very small exception, also large portions of neighbouring parishes belong to him. His cottages, with half an acre of land attached, are let at very moderate rents; one of the principal conditions in the agreements being that the children, as soon as capable of going and up to the age of 11 years, shall be sent regularly to school. The parents generally speaking do not show any objection to this rule, which is strictly enforced in all cases, except there be sickness in the family, but on the contrary I believe are well satisfied with it; and in many respects it works beneficially for all concerned. Such a system could not, however, be carried on throughout the country, because owners of cottages often want to get all they can for their property. The poor here are satisfied with it, because they get an equivalent for what, under other circumstances, their children might earn by going out to work.

Before I came here I was connected with property in the manufacturing part of Cheshire (Mottram and Tintwistle), and consequently am acquainted with the factory regulations as to the education of children, and I believe something of a similar character might with advantage be adopted for the agricultural poor. As, however, the cottages are much scattered, and the children have to go considerable distances to work, they could not work one part of the day and go to school the other; but I think they might go to school a certain portion of each week, or, it would be better, every other day. The fact of their being from school an *entire* day would be objectionable, but unless the farmers be deprived entirely of the services of the children I do not see how it can be avoided; and the labour question in some agricultural districts, particularly the arable, is becoming so serious in consequence of emigration and the facility afforded by railways for getting to the large towns, &c., that I think the services of the children are almost indispensable. It certainly is important that the children of the agricultural poor should in some way or another receive an elementary education.

Mr. Tollemache has a large district school here, and some of the children from neighbouring parishes are occasionally taken away to work in gangs. The sexes work together, and we find the system has a very demoralizing effect on the children; this is, however, owing in a great measure to the fact that oftentimes the man who has charge of the gang is totally unfit to have the care of children; and I think all persons having charge of gangs should be required to have certificates, to be granted by inspectors (to be appointed for this and other purposes in connexion

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with the question), who would give certificates only to persons of persons of good character, &c., say, who could produce a character from the clergyman and churchwarden of the parish.

132. *Rev. G. Everard*, Vicar of Framsden.—A great part of this parish belongs to one large landowner, Mr. Tollemache, and there is supposed to be a stipulation that the children of his cottages shall all attend school up to a given age; this was 10, it may now be 11. But the rule is not fully carried out here. If it were strictly carried out it would be very much objected to by farmers who wanted children for work, and might be unable to get enough.

In this neighbourhood there would be great difficulty in requiring by law all children who work in gangs or in other ways to attend school, on account of the distance from any school. The children in this parish go Mr. Tollemache's district school in Helmingham, the adjoining parish, and some of them have to go 2½ miles. There is no school within five miles of it in this direction. But where a school is within reach I should be glad if there could be such a requirement. In the great majority of cases such a law would be attended to without the need of appealing to authorities. It would greatly strengthen the clergyman's hands in pressing the duty on parents. Children could not come to school after being at work on the same day, as they get tired, wet, &c.

All decent mothers, I think, have a dislike to their daughters going out to gang work, and feel that it degrades them, especially on account of the language used.

133. *Mr. C. Kersey.*—I farm from 500 to 600 acres, and have been churchwarden and guardian here off and on for upwards of 20 years. My family have held this farm for 100 years. Most of the land about here is heavy and the occupations small, say the larger averaging 150 acres, but there are many from 30 to 40 acres. There are not, however, so many small farms as there used to be; they are breaking up.

There are very few parishes to be found about here that keep up their population; the last census showed a great decrease. Now that people can move about the country more easily it is more difficult to keep them settled, but at present I find no lack of labour. This parish is large in population and extent, say 2½ miles each way, but we are fortunate in having a great many cottages, and where people can work near home they do not care to work far off. Our men come home to meals.

Where the population is thinnest, there you will find most gangs. I do not like them; they are bad for the morals. I do not like them for work either; a large number are not likely to do the work so efficiently as a smaller. It stands to reason that a man cannot see that 25 or 30 women and children are all doing their work properly. I employ a few, say about 8 or 10, women and girls, the latter chiefly with their mothers, without an overlooker, the foreman only going to look at them occasionally; and boys I put about here and there, one or two with a man. Women and girls work usually from 8 a.m. till 5 p.m., with an hour for dinner. We do not consider that they stop for dinner when working one journey, except just for 10 minutes or so.

There is only one gang here. One of their chief employments is stone picking, which comes in March and April, and lasts perhaps four or five weeks. In a heavy country like this it could very seldom be done in winter. Stones are picked chiefly for the sake of making the roads; it would be an expensive affair if we had to raise stones for this. The fields do not get bare of stones from being picked; there is always a supply, though some lands will produce more than others. At this work, and pulling weeds, girls do as well as any boy. Farmers here employ very few boys till about 12 years old.

Women earn 7*d.* or 8*d.* a day in field work, and girls from that down to 4*d.* Men's day work is 10*s.* a week, but at times they will do a day and a quarter's work or more in a day, *e.g.*, at haysel men will earn, perhaps, 2*s.* 9*d.* a day. They have also other advantages, such as oven firing, which we give them as well as a good many other perquisites. Farmers here bring coals free to their own labourers' doors from Ipswich, which is 11 miles. Good coals cost there 1*l.* or 1*l.* 1*s.* a ton. I reckon, as I have found from looking at my books, that one way or other my full labourers cost me 35*l.* a year each.

Upon principle I think that children ought to be educated, and have considered what amount of time would be sufficient for the purpose. Could not three hours a day be found sometimes? Saturdays, too, we do not consider much of a day for work; women are at home cleaning, and I never expect to see them long on that day. I consider that children in agricultural districts do not require regular instruction after they are 12 years old. If they wish for further improvement I should suggest the establishment of evening classes.

134. *Abel Scearrow*, Freckenham.—I overlook a set of children for the chief farmer here; my full number is about a dozen, mostly boys from 7 to 12 years old, and girls from 8 to 14 years. Another farmer has rather fewer, and some only three or four. If you have children to work you must have some one to look after them, else if you went into the field you wouldn't find them. From 7 a.m. till 6 p.m. is our proper time of work, but the farmer does not look for us to start till after 7. Some of the children ain't hardly up, so they have to take a little bit in their hand to eat. They stop for lunch at 10.30 a.m., besides dinner. We have to go quite three miles sometimes; our field is the longest. We begin about March. There used to be stone picking, but hasn't been any since there was a difference about the roads. It was the road people used to want the stones. Some farmers would as lief have the stones on the land; sometimes they are so thick you may shovel them off almost.

I get the same pay as a labourer, *i.e.*, generally 10*s.* a week; last year it was 9*s.* The children get from 3*d.* up to 6*d.* a day. A girl does not get more than 6*d.* till she is married, though she is 17 or 18 or more. I do not often have any boys older than 12 or 13, except sometimes of an afternoon when they are done with on the farm, *e.g.*, at rolls, harrows, &c.

My children have all gone out to work about the same age, viz., from 7 to 9. They are all better scholars than I am. (Three of the girls read, two of them aged 14 and 9, not without spelling.—J. E. W.) Of seven alive now out of 11, two girls went at 7; one boy wasn't 6 years old, I should think; I could not keep him away. The first job is almost always keeping crows; he wouldn't keep the land, and his master flogged him, so I took him away to go about with a "dickey" (donkey) and cart; he used to go miles with it.

The children are very troublesome; you cannot do anything with them without a stick. I thought I should go to gaol for hitting one girl, who was about 14 or 15, so I hit no more. I never hit to hurt any, only just to brush their tails a bit and make them walk up.

135. *Mr. William S. Barrett.*—We don't require an out-town gang here now; we have enough workers without. Formerly there was a good deal of dibbling, and then there was more regular gang work; they came from other villages near. The way here now is for farmers to get a few children together, boys and girls, at from 3*d.* to 6*d.* a day, for as long as they are wanted, and then discharge them. On my farm I may have three or four; one farmer has a much larger set, and keeps them longer, having more land. Some children work very young, perhaps down to about 7; they are no use then, and I would sooner be without them. There has never been a regular gang in the place, and I can speak to 40 years back; there

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used not to be so many children together even as there are now.

136. *Mr. Samuel Sharpe*, National schoolmaster.—I have been used to a half-time school, having taught in one at Bradford for six years. I have been master here nine years. The average number of boys there was 120, and of these about 40 came for only half days; the latter were taught along with the rest, and as a rule got on very well; we used to rely as much on them as on the others at the inspection. Their shorter time on each day was made up for by their being obliged to attend regularly, while the others could be irregular, and would stop away sometimes, perhaps, a week or two.

If children were obliged to come into this school in the same way, or for two or three days in each week, I could manage their teaching very well by distributing them amongst the classes. If only a few, say half a dozen, came in this way, the arrangements would be easier than with a large number. This school is quite small, about 45 boys and girls from 4½ years old upwards. Reading, writing, arithmetic, and dictation are gone through every day.

The morning is much better for teaching than the afternoon, but the difference is greatest in warm weather; I have always found more spirit in both master and children in the morning, and accordingly always give the lighter teaching in the afternoon, and the girls do their needlework then. When I want to give an oral lesson in the afternoon I find that I am not in the same tune for it. In the factory school the children took the mornings in turn by alternate weeks.

The fathers and mothers would not dislike half-time at all, I think. The chief difficulty would be with the farmers, because they want their work done. Men about here are migrating; at one neighbouring village there are generally a number of them doing nothing.

If there was a rule for children to come to school, I should visit the mothers of any that did not and speak to them about it; I have to do that now to keep the children together at all. Boys on the average stay here till 8 or 9 years of age, and girls till about 11, and if they are called off at times before, come back again.

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137. *Elizabeth Wilson*, Exning.—One of my boys, now 10, works in a gang for a large farmer here; there are, perhaps, 20 boys and girls in it. They call it a gang, and a man looks after them. They work from 7 a.m. till 6 p.m., with breakfast and dinner time, and don't ever go more than a mile and a half. Both my girls, now at service, worked in a gang. Sometimes they would be wet from rain or dew, and some girls, I believe, take a great deal of cold from this, but mine didn't go a deal. There was nothing that I minded as to language or anything in the gang for girls, though I would sooner have kept them at school if I had not been obliged to let them go out. The man is a very nice man. Another farmer here has a set of children in the same way; another of my boys, now 12, who usually does other work on the farm, is gone in the gang to-day. No children in the place go younger than 8 or 9, I should say; they would be too much trouble.

Last harvest the boy now 10 was hired by a man at 6*d*. a day to make bands for sheaves for him, and afterwards led carts for the carrying; he had to start at 4 a.m., and was not back till towards 9 p.m., or sometimes later. There were no fixed times, but they had to work pretty well as long as they could see to get the horses put up by dark; it was some distance off, near Newmarket. They stop for breakfast at 8 a.m., and dinner at 1 p.m., and also have an "eleven o'clock" and a "four o'clock," but do not stop again after 4 p.m. till they leave off at night. He used to be very tired when he came home, and could not have kept on long with it; I was obliged to wake him up in the morning, but had not a great deal of trouble with him; afterwards he was gleaning with me.

At bird keeping they are obliged to go on Sundays, but get nothing for Sundays, *i.e.*, they get 5*d*. a day for six days, or 2*s*. 6*d*. a week. I have heard of something being given for Sunday in other parts. Bird keeping lasts a good many weeks in the year altogether. The chief times are when the corn is sown and when it is getting ripe, but sometimes birds are kept from the stacks too. One of my boys had to do this all through the winter. The crows come and pull the straws out and litter them all over the field, so that they have to be picked up.

My three boys at work, the eldest 14, can read and write, and have done sums at school, but are not perfect in them; they have not had practice enough.

> [The schoolmaster, Mr. J. A. Dalzell, gave a like account of the employment of children in private gangs or sets, and considered it better for the children than the large public gangs with which he had been acquainted elsewhere. Still many children do not come to school at all, though he could not say what prevented them, except that education was not valued enough.]

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138. *George Moore*, Friston.—Have been hoeing to-day with the gang; there are about 14 boys and girls in it from 9 to 14 years old. Work from 8 a.m. till 5.30 p.m. At bird keeping I had to stay from 6 till 6, except at barley, and then from 5 a.m. till 8 p.m., because the sun rised early and was down late. Sunday was the same as other days. Got 3½*d*. a day.

No, I can't read that (child's book); I ain't scholar enough. Never go to school on wet days; we can't go for less than a week. Go to chapel school on Sunday.

139. The following statements, from No. 140 to No. 160, both inclusive, are from written communications in answer to the printed Form of Questions to which the numbers refer.

140. EYE.

Population - 2,430. Acreage - 4,320.

(13.) By the foregoing answers it will be seen that no females are employed on the gang system here. This is owing to the interest taken in it by Sir Edward Kerrison, who is owner of the greater part of the parish of Eye, as well as of much of the parishes comprising the parliamentary borough of Eye, and which immediately adjoin Eye. It was entirely by his desire that girls are not employed in these gangs.

The demoralizing effects were seen to be so great that for some years past only males have constituted the gang, and it certainly has worked admirably, for a distinct moral control is at the same time exercised over these lads by the instruction given to the master to check all obscene language and unbecoming behaviour, not only in their work, but if they are so ill-behaved either by language or manner when not in their work it is checked by special observation to the proper quarter, and the individual is admonished so as to let him know that he is not unobserved, and most probably he will find it much more to his own interest to behave in such a manner as may warrant those who have the power and influence to help him in after life. And all these poor people well know from practical experience that they have the kindest friends in Sir Edward and Lady Caroline Kerrison.

Year after year young lads and young girls are looked after and helped out in their start in life, and assistance given in clothing and travelling expenses where the parents require the help. This has an immense moral effect on the poor of the place and neighbourhood, coupled with the fact that the large landowner is a resident and taking personal interest in the welfare of the people.

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The employment of these lads (and it has precisely the same effect whether employed in the gang system or individually by the occupiers themselves,) does interfere most materially with their education. Their earnings are so useful, and seem to their parents so absolutely necessary to help in their support, that it is most difficult to make them see the value of education. Their material wants so far overrule their views on school attendance that it is utterly impossible to contend with them against it, and it will always remain so until some legislative interference is brought into operation to enforce the attendance of children between 9 and 13 years for a certain portion of every work day for the purposes of education. The condition of these children and their future prospects in life demand it, the welfare of the society of which they are to form a part demands it, and I am confident that we must not look for a general education of the children of the poor until some system of this sort is accomplished.

Individual instances there may be where the benevolent wishes of a large landowner are so well seconded by the active energy and cheerful tact of a schoolmaster, with the cordial assistance and co-operation of the clergyman, that the parents' minds are led to work in with the desire of educating their children, but there are rare instances of such a master with sufficient tact to show up to the parents a sufficient inducement to keep their children at school for a reasonably sufficient time. Such an instance I have on the estate of the Most Noble the Marquis of Cholmondeley at Great Bircham in Norfolk. There the efforts of the master are better appreciated by the poor themselves than in any other instance under my knowledge, but it is because the noble liberality of the marquis and marchioness entirely supports the school, and not only so, but the boys and, more especially, the girls are assisted in their outfits for service, and watched and looked after for years after. This is known to them, and it has a great good effect.

The gang system, if confined to males under the judicious supervision exercised by Sir Edward Kerrison, I see no objection to. On the contrary it tends to render these lads amenable to discipline and keeps them in order. But the gang system where females are allowed to partake in it is highly objectionable in any shape, for it entirely demoralizes the female mind, renders it unfit for domestic life and duties, and breaks down every barrier of decency and decorum which should exist especially in the female character.

W. L. B. Freuer,
Estate Agent.

141. *Letters referring to the above.*

(Letter No. 1.)

Chandos Lodge, Eye,
October 5, 1866.

Dear Sir,

I have at last been able to give a little time to the papers you left with me, and now enclose them. I fear my remarks may not be of much use to you, but, such as they are, they are the careful and deliberate result of 40 years constant and active experience amongst the agricultural poor.

I was brought up a farmer, and a considerable employer of labour in the early part of my life, but for nearly 20 years I have been regularly engaged as an estate agent under Sir E. Kerrison, Bart., in Suffolk and Norfolk; the Marquis of Cholmondeley for the Houghton property in Norfolk; Lord Bateman's Suffolk estates, and several other smaller landowners, in all ranging over about 34,000 acres of land.

Believe me, &c.

J. E. White, Esq. W. L. B. Freuer.

(Letter No. 2.)

Chandos Lodge, Eye,
November 3, 1866.

Dear Sir,

* * * * *

That the young do value education I have ample proofs in two evening adult schools I am intimately connected with and interested in; one has 69 members, and the other 35, who gladly pay their 1*d.* a week for two nights' instruction, most given by private instruction. They are of all ages from 10 to 25 years, very many of the youngest especially showing by their constant attendance and their earnest desire to improve that their voluntary enrolment of themselves in these evening schools is sincere in its fullest extent.

The employment of children of the ages of from 9 to 13 is very often precarious, *i.e.,* they lose much time, especially in winter by bad weather, and in summer it is variable, so that a compulsory educational half day would not in the end deprive them of *much* of their wages taking the year through. * *

You will, I doubt not, see that I feel very strongly on this important subject, and would gladly see some permanent sound settlement of a better system of education for the poor children.

Believe me, &c.

J. Edward White, Esq. W. L. B. Freuer.

142. STRADBROKE.

Population - 1,400. Acreage - 3,660.

(One gang; number varies, 35 to 20; towards a third females; ages 9 to 14. Extracted from Return.—J.E.W.)

(11.) Education is most injuriously affected by the gang system.

(12.) The only ostensible bad result on morals is an excessive coarseness and rudeness, and want of modesty and decency among the girls.

(13.) The evils of the gang system depend greatly on the character of the gangman. In my own parish the gangman is a tolerably respectable married man, keenly alive to the difficulties of his position, and very anxious to keep order in the gang. Last winter I got him to attend my night school, and I found him a very regular attentive scholar.

He is decidedly of opinion that children below 9 years old are of little use in a gang, and declines taking them. In conduct he thinks there is little difference between boys and girls. In wet weather he thinks the girls cannot do nearly so much work as the boys, and spoil their clothes so much that they hardly earn remunerative wages. The rate of payment he gives the children is from 8*d.* a day to the oldest to 3*d.* a day to the youngest.

If any legislative interference takes place I venture to suggest the following points for consideration:—

1. That no child, whether boy or girl, should be allowed to work in a field gang before 9 years of age.
2. That even at 9 years old, no child should be allowed to work in a field gang, without a certificate of having attended school at least one year.
3. That the gangman of each parish should be licensed or registered either by the board of guardians or two magistrates of the petty sessions, as a fit and proper person to be a gangman.
4. That the names and ages of all children in the gang should be duly registered, and a list kept and inspected by the board of guardians at each sitting.

I only add that if I had my own private wishes carried into effect I would prohibit any girl working in a field gang before the age of 14. My own opinion is that girls who work in gangs as a rule become totally unfitted for the chief duties of a woman. They are entire spoiled and disqualified as servants and needlewomen. They make bad wives, mothers, and housekeepers. They often turn out bold, forward, immodest young women. The best and steadiest labourers' wives in my own parish detest the gang system, and will never allow their girls to join the gang. After 14 I suppose a girl must be allowed to use her liberty and work in a gang if she wishes. Though my belief is that in the vast majority of cases a girl would have got employment of some kind, and would not begin field work, if she had not been employed in it before 14.

The injury that the gang system does to rural schools is so self evident a fact that I do not dwell upon it. It is one of the great difficulties that managers have to contend with in keeping up the average of attendance.

The pecuniary advantage of the gang system to the labouring classes, in the case of girls, is almost counterbalanced by the injury of their clothes, shoes, and stockings. In fact the best managing labourers' wives declare positively that in the long run it *does not pay* to send a girl to do field work.

I send with this, little photographs of a select party of my gang, with the gangman in the centre, and of two gang children with the usual baskets they carry.

John C. Ryle,
Vicar of Stradbroke.

143. WITNESHAM.

Population - 634. Acreage - 1,996.

(1.) There is one gang in this parish of 26 children and another in the next of about —— children. The children of this parish work in both.

(2 and 3.) Twenty-seven children are (now May) absent at work from school, and there are besides a number of others who have left school, in all the number is between 30 and 40. (Sexes about equal.—J. E. W.) Of school children six are in the gang at 7 years of age, seven at 8 years, six at 9 years.

(4.) (Usual weeding, &c.—J. E. W.) Children are also employed in scaring birds, keeping sheep, cattle and pigs.

(5.) The furthest limit may be two miles.

(6.) The children belonging to the gang meet at the place for work at 8 o'clock, have one hour for dinner from 12 o'clock to 1, and then work till 5.30 o'clock. Unless their homes be near they remain in the fields.

(10.) In fine weather and warm the influence is beneficial, in cold and wet weather very prejudicial to health.

(13.) The system having become very general and offering facilities to the occupier of land for getting through certain kinds of work is likely to become extended rather than curtailed.

When the weather is fine the health of the children does not suffer, but as they are exposed to sudden changes of temperature and weather they are frequently ill. I was called to attend to-day a case of diphtheria in a child only 6 years of age, which had been stone picking in the fields and was stated by the doctor to be past cure.

It appears to me most advisable to regulate the labour of children under 10 years of age by legislative enactment. They ought not to be exposed to the risk of rain and the cold and changes of temperature for so many hours successively; from 1 o'clock to 5.30 appears to me to be a sufficient space of time for labour in the open fields on any single day in the afternoon, or from 8 to 12 o'clock in the morning. The gangsman might take half his children in the morning and half in the afternoon. I think also they ought not to be taken to work under 8 years of age at all.

If my Lords of the Committee of Council on Education would pass a minute enabling managers of schools to adopt a system of half-day labour for the scholars of 8 years of age and upwards in the schools under the Revised Code perhaps an improvement might be made upon the present system of great advantage to the children and acceptable to the parents, who very much depend on the children's earnings for their clothing.

A responsible and respectable man might be engaged to superintend, and the sexes might be kept separate.

W. Potter,
Rural Dean, and Secretary to the branch of the National Society in the Archdeaconry of Suffolk. (Also Diocesan Inspector of and Schools.—J. E. W.)

144. HEMINGSTONE.

Population - 381. Acreage - 1,444.

(13.) As to the parish of Hemingstone, though I have stated that several children are employed in gangs (*i.e.* of adjoining parish, Question No. 1.—J. E. W.), I can hardly say that the gang system has thoroughly taken root in it. It happens sometimes that a man who from some cause or other is an inefficient labourer collects together a few children whom he employs to pick stones or weeds from the land, whilst he occupies himself in keeping them to work and carrying in baskets or otherwise the stones or weeds to the borders of the field.

It is not unlikely however that the adoption of the system will become general in consequence of agricultural labourers becoming fewer. What with the alteration of the law of settlement, the facility of locomotion, the low rates of agricultural wages, and the demand for labour in the metropolis and populous places the rural population in this part of the kingdom decreases, and consequently the work which used to be performed by adult men is likely to be done by women and children. I mean such work as hoeing and weeding.

Thos. Brown,
Rector of Hemingstone, and J. P. for Suffolk.

145. DEBENHAM.

Population - 1,488. Acreage - 4,000.

(Three gangs under men, one under a woman. Total about 60 persons on average; males and females, most of the latter. Sexes work together. Education low, morals ditto; horrible language used. Extracted from Return.—J. E. W.)

(13.) The more respectable parents have such a horror of the evils of the gangs that they will not let their girls go into the fields. Few girls who once have taken to field work become fit for domestic service; nor do they make good wives, very generally noisy and slatternly. This of the habitual gang workers.

The occasional employment of children in seed time enables parents to earn a little extra money. I often find a child withdrawn from school for a week or two "to earn a pair of shoes." I remember once hearing the chief gangsman here say that in one week he had paid 30*s.* to one family. A fortnight ago he paid one family as follows:—

	s.	*d.*	*s.*	*d.*
1 boy 5 days at 6*d.* - -	2	6	6	3
„ „ 4*d.* - -	1	8		
1 girl „ 5*d.* - -	2	1		

The general wages at day work are,—

Women 8*d.* to 6*d.* and no good.
„ 4*d.* to 3*d.* the lowest.

When piece work is taken in stone picking the price is 6*d.* a load. One farmer pays the children himself, and they lose no time.

It is a good thing for the farmers; the weeding could not be done without it, and they sell the stones when picked and pay their way rates out of them.

But the system declines. Children cannot be got. Parents if possible will keep them at school, and this is one reason why the schools are unpopular with tenant farmers. Besides the boys and girls go to service when very young. The chief gangsman (who has given me this information) had the year before last 35 in his gang, last year 26, and now has only 12, though to get more he would raise the wages.

C. Cornish,
May 12, 1866. Vicar of Debenham.

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146. CODDENHAM.

Population - 1,000. Acreage - 2,713.

(One gang; 20 children, chiefly boys. Extracted from Return.—J. E. W.)

(10.) The employment exposes the children to bad colds and sore feet from worn out shoes and stockings.

(12.) The mixture of sexes tends to injure the moral conduct of the children, and their habits become more vulgar, and they are more indifferent to their appearance and to their language.

(13.) The gang system in employment of the children of our poor, although not extensively carried out in this parish or hundred of Bosmere, I believe to be attended by bad consequences as regards the future well-being of the children.

One very serious result of such a work is that the children have no opportunity of getting instruction in our day schools. They also lose the respect for their clergyman and persons of independence in the parishes where they reside, seeing no one who cares about them but their parents from one week's end to another. And when the children come to the Sunday school they are much more unruly, and bear a bold appearance and show an indifference to learn instruction which is seldom or ever (never?) observed with children who are not employed in gangs.

Another evil arising from the gang system is that the children employed in the work too frequently return home, especially when the days are short, with wood and other things which do not belong to them. Their master leaving them when the hour of leaving off work arrives the children are under no supervision and under no restraint whatever, and return home noisy and vulgar with their tongues, &c., &c.

I have proved it to the satisfaction of many of the poor women (parents) in my parish that the few pence, varying from 1*s.* 6*d.* to 2*s.* per week, is rather a loss to them than a gain in the end. The wear and tear of shoes and clothes and a much more hungry stomach, besides other evils I have before mentioned, more than destroy the advantage the parents look for from their children's employment in the field.

If children must be employed in gangs I should suggest that *boys only* should be allowed to be employed under proper regulations.

Yours, &c.
R. LONGE.

(Vicar of Coddenham, Rural Dean.—J. E. W.)

147. WORTHAM.

Population - 963. Acreage - 2,800.

(Three gangs; mixed, males and females; all under 12, and about equal in number. Hours 12 to 14. Extracted from Return.—J. E. W.)

(10.) The influence depends upon the food and constitution. In many cases early decline.

(12.) The danger to morals is in going and returning unprotected.

(13.) There is little dropping of wheat as formerly; the work is done by machines.

The general observation to be made is that the education of children when thus employed, (at) from 2*d.* to 4*d.* per day, is greatly neglected; that though the parents receive the additional sum of 1*s.*, or 2*s.*, or 1*s.* 6*d.* of their earnings per week, they cut off the 1*d.* per week that should go towards the support of the school. I consider that the frequent colds they catch, the wear and tear of clothes and shoes, independently of the bad habits counteracting the school discipline, are more injurious both to parents and children than the earnings are lucrative.

R. C.

(*i.e.*, R. Cobbold, Rector and Rural Dean.—J. E. W.)

148. THORNDON ALL SAINTS.

Population - 620. Acreage - ——.

We have had a gang until this year. The boys and girls worked together, which caused, I believe, great evil. The master of the gang is a respectable person, and very kind. The whole system, however, seems to be full of evils. Education is neglected and morals corrupted, and I am thankful for not having one this year.

My own opinion of the gang system is that (it) is the one great obstacle in the clergyman's way. It is impossible for him to exercise that influence he would otherwise, under the system. As far as my own experience goes, (in) every parish where the gang system is in full force, the immorality at a very early age is fearful in both sexes.

W. H. GLOVER,
Rector.

149. FRESSINGFIELD.

Population - 1,325. Acreage - 4,500.

(Two gangs; one 10 to 12, the other 15 to 20; more at flax picking. "Males and females in proportion nearly 1 to 3." Extracted from Return.—J. E. W.)

(11 and 12.) The least educated go. As a rule the worst families form the gangs. In some instances girls of from 12 to 14 go with their mothers and work with them.

(13.) The gang system a few years since was an unmixed evil. The most idle and dissolute person often was the one to conduct them, and the same class too often formed them. The language used and the habits acquired were the very worst possible. But now, and of late years, the system is much improved, and the whole conduct and character of employer and employed are far better. More care is taken, and the numbers in each gang are far less. In many instances, and especially for flax picking, women only or chiefly, and those the labourers' wives, are employed. In my own parish this is the plan I have long urged upon my farmers to adopt; and through our personal influence, I believe, in most instances we may do more with them to remedy the evil than any legislative enactment can do, from the impossibility, considering weather, seasons, &c., and all the circumstances attending agricultural labour, of so framing details that they can be carried out or enforced.

Time and a little money is sometimes saved, and trouble to the farmer spared, given work is done in a given time and for a given sum by the gang system; but right-minded men will prefer, and do prefer, giving a little more for work which is often better done in the end, and moral evil avoided. The parents care more for the education of their children, and we try hard to keep all our school children from a gang at all; and those from 12 to 13, or even from 10 to 12, who do go have been educated more or less in our schools, so that all this has tended to improve very much even the modified system, both as to language and general conduct. Then, again, at certain seasons the labour of the young is needful in order to learn field work and to secure its being done quickly.

W. R. COLBECK,
Vicar of Fressingfield.

150. WINGFIELD.

Population - 593. Acreage - 2,441.

(1 and 2.) One gang, males and females; aggregate number, 14.

(12.) I have heard of late of nothing indecorous. * *

(13.) The less thrifty and frugal avail themselves of this employment for their children, and likewise where the families are large or only one parent living.

H. JOLLYE,
Resident Incumbent of Wingfield.

151. THWAITE.

Population - 135. Acreage - 830.

(1 and 2.) At intervals young persons (of) from 6 to 16 are employed in gangs for picking stones and weeding. From 12 to 16 persons.

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(6.) The usual hours of labour in the parish, with the usual intervals for meals.

(9.) They work apart, boys and girls respectively, under the direction of a man.

(12.) I do not think, as practised in this parish, that the system is attended with evil results.

G. W. Kershaw,
Rector of Thwaite, and Rural Dean.

152. PETTAUGH.

Population - 287. Acreage - between 600 and 700.

(1.) Gangs are occasionally formed for picking stones and speargrass off lands.

(2.) Highest average about 20 in each gang, male and female together.

(3.) Ages of either sex between 7 and 15; one or two over 18 occasionally.

(12.) Being so young, I don't see that any harm can arise affecting their moral condition.

(13.) I see little objection to the system in this parish and neighbourhood.

J. K. Tucker,
Rector of Pettaugh.

153. WINSTON.

Population - 352. Acreage - 1,400.

(2.) From 8 to 18, chiefly females.

(12.) Speaking generally, pretty good; but the gang system is mischievous in a moral point of view, where the sexes are many (?) and mixed together. The farmers say that they cannot dispense with the gang system, owing to the scarcity of labourers and the abundance of work at certain times of the year, which must be done by children if done at all.

Andrew Gatenby, Vicar.

154. FRAMLINGHAM.

Population - 2,450. Acreage - 4,581.

(1 and 2.) Two. The system is on the decline in this parish. Six years ago the average number of each gang was 30, now seldom more than 18, who are either grown up women or the wives of labourers. Although children are employed in field work very few of them at present work in gangs.

(13.) It is said by those who are capable of giving an opinion on this subject that it is not advantageous either to the employers or the employed. Nearly all the children of the poor attend daily the parochial schools. They are admitted young, and generally leave at an early age, the girls being needed as day servants to families in the town, and the boys as shop boys or apprentices, or migrating to London. Very few, therefore, are available for field work, and consequently the grown up women, single and married, are of necessity employed.

Geo. Attwood,
Rector of Framlingham and Rural Dean.

155. WITHERSFIELD.

Population - 640. Acreage - 2,400.

Some years ago the system prevailed here, and I found it productive of great immorality. Nor was this the only evil. The girls became coarse and masculine in their language and manners. Needlework is now to be had at the neighbouring manufacturing town, which the young girls avail themselves of; and the effect is that their condition is in every way ameliorated. The boys go to school instead of working in the fields at a very early age. I do not think the gang system prevails in my deanery to any extent worth noticing.

Wm. Mayd, Rector.
(and Rural Dean.—J. E. W.)

156. WHITTON-CUM-THURLESTON.

Population - 565. Acreage - 1,445.

No such system *now* exists. It was tried by one occupier two years ago, but not being found to answer the anticipations was discontinued, and has not been resumed.

William Howorth, Rural Dean,
Rector of Whitton-cum-Thurleston.

157. HONINGTON.

Population - 328. Acreage - 1,131.

(2.) Varies from 8 to 20. (Mixed gang.—J. E. W.)

(12.) Very bad.

(13.) Such gangs are a great convenience in an agricultural district, but the effect is an immoral and bad one, as the employers have no control over them.

(Return by Mr. E. K. Cooper, Euston, agent on the Duke of Grafton's estate.—J. E. W.)

158. LEISTON.

Population - 2,300. Acreage - 5,000.

(1 and 2.) One gang; from 18 to 30, average 25. (Of the number given in the table, 25, all but three are females, and nine of these married women. The town has large agricultural implement works.—J. E. W.)

(9.) Together; a great evil.

(13.) Under proper restrictions and regulations the system might be much improved, and not bad. If wages were higher wives would be kept more at home and children longer at school.

(Questions addressed to Rev. J. C. Blathwayt, Incumbent.—J. E. W.)

159. FRISTON-CUM-SNAPE.

Population:—Friston - 460. Snape - 600.
Acreage - 3,600.

One gang; boys, girls, and women from both parishes. Number 26; varies from 14 upwards. (Extracted from Return.—J. E. W.)

(13.) Children about 7 years of age scarcely form any part of a gang; such are very often found with their respective mothers in the fields picking stones for repairing of roads, or engaged in some other light work; but such an early employment fearfully clashes with the necessary elementary education of such children.

Girls for some time employed in gang work lose all taste for domestic pursuits, a love for unhealthy liberty sets in, untidy habits arise, they turn aside from service in farm or other houses, know little or nothing of sewing, washing, making or mending, and entering upon marriage are generally untidy, slovenly, and bad managing housekeepers.

Young people in gangs are seldom found in weekday or Sunday schools.

The gang system here does not date far back, say, not more than 12 or 14 years; but the growing want of adult labouring hands tends greatly to promote the practice. During the last 10 years Friston population, a purely agricultural, has decreased about 70 or 80; that of Snape, having a large malting establishment adjoining, is stationary. Young people, men, and women leave for distant spheres for better wages.

The wages of common labourers have been from 9*s.* to 10*s.* per week. This year, agricultural produce being higher, wages are advanced. During the last 30 years resident here I do not recollect labourers' wages lower than 9*s.* per week, and not higher than 12*s.* Some farmers here do not like the gangs on their grounds or farms, considering that they do not do the work so well as older hands, not from any other reason.

What we understand by a gang is this:—" A set of

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young persons doing farm work under the superintendence of a man who sets himself apart for this purpose and takes the work (either by the day for himself and party or by the piece) wherever, *i.e.*, on whatever farm he may be called upon to do so." A man taking to this line is, as they say, "a looking up" man, as he considers himself an employer. In actual condition he is not necessarily a better-to-do man than the ordinary labourer who is regularly employed, the gangman being obliged to lose so much time through the bad weather.

In general as to the education of the children of the poor in agricultural parishes I feel, from long observation, that the most effective school machinery in a parish can never affect for good many of the children of the labouring hands. The reasons are,—"The children if sent to school at all are so early taken away and so early put to work, the parents so often undervalue a good education cheaply provided, and parents are often so obliged to have their little ones so early to work that the little earnings brought in by the children may help towards the support of the family." Labourers generally value education for their children, and often sacrifice much to obtain it; but there are many who make no effort; advice, persuasion, or example avail nothing; nothing will ever move such but a positive compulsion; the school is at the door, but pertinaciously and stupidly neglected. Some scheme to make it obligatory on parents to place their poor neglected children under some elementary instruction is absolutely necessary. Many interests clash with such a provision, but the necessity is manifest and absolutely urgent.

ROBERT BAKER,
Vicar of Friston and Snape.

160. WORLINGTON.

Population - 349. Acreage - 2,080.

There is not in this parish what can properly be called the "gang system;" nevertheless the children of the parish are employed in the fields in one way or another at so early an age that it is impossible to retain the boys in school much after they reach 8 years of age, or the girls after they are 10 or 11. Thus all effective education is impracticable, and the morals of the young are seriously injured.

Sunday labour is common in "land keeping," and by boys under shepherds.

W. SINGLETON.
Rector of Worlington.

161. *Letter from the Rev. C. Hill.*

Buxhall, Stowmarket,
December 14, 1865.

DEAR SIR,

THE hop grower in this neighbourhood pays the pickers by day wages; women 8*d.* to 9*d.*, children 2*d.* to 8*d.* Thus a child who first comes, either with its relatives or independently, gets 2*d.* a day, and its name gets into the "books." The following year the child who was thus booked gets 3*d.*, and so on, increasing 1*d.* per annum till the limit of 8*d.* or 9*d.* is reached.

Some children are so small as not to be worth 2*d.*, and in that case the farmer who finds the little thing daily assisting in the work bestows some trifling gratuity.

An "overlooker" is employed to pull and bring the poles to the baskets (or, as called by the pickers, "skips."—J. E. W.), and generally to see that a fair day's work is done, but no "middleman" intervenes between the master and worker.

I am, &c.
COPINGER HILL.

P.S. Some pickers walk long distances morning and ing, say up to three miles.

E. White, Esq.

162. *Ada Welham*, Buxhall.—I have worked at hop picking here, and did so from the time that I was a child 5 or 6 years old. The work is done in this way. A man named E——, who comes from a distance, takes the work from M——, to whom the ground belongs. E—— always has 12 men called "lords" under him; each lord has five skips, holding about seven or eight bushels each, for picking the hops into, and for each skip there are four full pickers, who make a "bun," as a set is called. Two children, if they are little mites, count equal to one full picker, or if they are very little perhaps three children. That would make 240 full pickers working together on the ground on which I worked, which was, I think, about 20 acres, but as there are a lot of children the number would be greater. The biggest half would be all full pickers, who get 8*d.* or 9*d.* a day. I was a big child, and was full picker by when I was 12 or 13, but that would be as young as any become so. My mother and two of my sisters and I used to make a "bun" together. There are a good many children picking without their mothers, as their mothers can't go. The women that sit along with them see to these children, and if the children are not big enough to take their own money, will bring it home for them. Big boys up to 16 or 17 years old used to sit too, because they used to be out of work so much, but now there are not enough to do the farm work, as so many go away to London, &c., so the boys at picking are seldom so big now.

We have to be on ground at 7 a.m., have half-an-hour for dinner at 12, and leave at 5.30 p.m.; it would be 6, but the women are from home, and like to get away. It is two miles for me to go by the road; some have four or five miles to walk to their ground. They are very particular with us about the time, and if you come on the ground a quarter-of-an-hour late you lose a quarter of a day. The rule used to be to have a bite in the forenoon at 9, but that was broke off. It's a long while to sit from 7 till 12 without any rest, and some used to say that they could not eat any breakfast before starting early.

The work is easy. We sit at it round the skip on long stools. We always had an umbrella, so did not get wet.

If it was very wet we had to come home, and then count the work by the quarters of a day. We never worked overtime. Sitting, however, is more tiresome to the young ones than to the older, because the older are used to it. If children are idle they would get the bind or a little twig to them, but only just as it ought to be used, not to hurt them; you must just frighten them sometimes. The smell of the hops makes them eat a lot of victuals, but the first day it is different. The picking comes in September, and lasts about three weeks when there is a full crop. My eldest child there will be just 6 by next season, and would be old enough for picking, but he is lame. I have not been picking the last four years; you cannot well when you have small children, but some take them with them, and put them to sleep in an old skip or somewhere beside them. I carried my oldest when a year old.

163. *Susan Ruddock.*—Last year I took two of my children hop picking, viz., a girl then between 7 and 8 years old, and a boy then between 5 and 6, *i.e.* about three months under 6. (Shows the ages in a Bible.—J. E. W.) Children like to get out at it at first, but thay get tired before it is done. I kept the boy at his work, though I was not forced to do so, because he was not set down as a picker. The man sets the pickers down just as you (J. E. W.) are writing in your book now, and another year the old pickers are taken on before any new ones, and all are taken on unless the lords are served (*i.e.* have enough). Some children are set down as pickers at 2*d.* a day. My boy got 1*d.*, but that was paid over the "bun," and the girl 3*d.* The wages are not paid till the picking is finished, but you can ask for some part before.

The girl has been out rook scaring this year; her sister, now 10, went the year before last. From 6

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.m. till 6 p.m. is the general time, and they go on Sundays too. For that children get 3*d.* a day, or sometimes 2*d.*; my little girl got 2*d.*

164. *Mr. Thomas Matthews*,* Newton-by-Castleacre.—Gangs are generally employed about here. The most substantial reason, I think, is that adult labour is scarce and becoming scarcer. The more intelligent men go off, and only the inferior are left. Perhaps we are rather more particular about the quality of it than farmers are in some districts; at any rate we have the credit of it, and find it economical. Men's average wages about here are 10*s.* a week. † They are 12*s.* now (1866), and in the summer months men will earn from 15*s.* to 20*s.* weekly, nearly all the work being put out to them by the piece. This parish has only 84 inhabitants, but more than 1,000 acres of land. There is no peculiarity in the soil to make gangs more necessary here than elsewhere; but work is done by their means which otherwise would not be done, and in some districts is not done.

There is work for gangs through most of the year, such as weeding corn in spring, then hoeing wheat, picking twitch, singling turnips, knocking (*i.e.* spreading) muck during turnip sowing, and after hay and harvest, then forking twitch in stubbles and turnips, and preparing turnips for sheep and bullocks. There is work of other kinds, such as, *e.g.*, gathering stones, cutting thistles with reap-hooks, &c. Where flax is grown there is a good deal of work for gangs in weeding that, and in pulling the flax when ripe. The most idle time for gangs is harvest, and few small children work then, though I believe some are occasionally employed in tying the corn. During harvest it is a difficult matter to obtain women or children, as they prefer gleaning the short ears of corn which we are unable to gather.

As a rule gangers are not first-class men, but farmers cannot help that. They dare not refuse to employ a man because he is not of good character, as they must depend on him if they want to get the work done. In a neighbouring parish, where there was an objection on this ground to the gangmaster, two or three started against him, but they were short-lived, and had to give up. I took to employing a private gang for this reason, but only large occupiers can do this. I occupy upwards of 2,400 acres in three occupations, and in two parishes. It has become rather general in this neighbourhood lately for large occupiers to keep private gangs under their own men. This is a much better plan. When a ganger takes work by the piece he makes the children work harder, though I daresay he pays them as much as farmers do and he will frequently keep them longer. I should say that there is never any overtime with gangs, except in this way. When a man takes a job he means to have money somewhow, fairly if he can.

It is an unusual thing for a gangmaster to employ so many as 70 or 80 hands, though I know of one instance. When at work, they are divided into two or more gangs, and most probably employed on different occupations. The average number in a gang would be between 20 and 30. When a gangmaster contracts with a farmer for any job I should say he would expect to realize about 2*d.* profit by every hand engaged. The *average* wages paid to a gang would be about 8*d.* per head per day, ranging from 5*d.* to 10*d.*, very small children at the former prices. With a private gang I give the man who what we call "drives" them 1*s.* a week more than he would have as a labourer, and he enters the wages of the workers every night in a book, *e.g.*, so many women and big girls, say of 16 or upwards, at 8*d.* (10*d.* now, *i.e.* 1866), so many at 6*d.*, &c.

If all were private gangs there would be little objection to the work. These would answer as well to the farmer where he could keep them, and they do not have to go so far to work; but to be a ganger requires peculiar qualities, and when a man is put over a gang, and gets into the way of it, if he is a shrewd man he wants to take a gang on his own account. There are certain jobs which most farmers put out, and some put out nearly all, and he wishes to have the benefit of these.

Children, as a general rule, are not much advantage to farmers under 10 years of age, at any rate in winter, though they are employed younger if they are brought, and in the summer months children as young as 7 or 8 can do the work. The better plan, however, I think, would be to fix one age, under which children should not work. I should say they ought not to be employed under 10 years of age. I would sooner that children were about 10 when they first come, but one cannot always have what one wants.

If older children, say those up to 12 or 13, had to give up a portion of each day or week to school, it would be a great inconvenience, but not insurmountable. We should have to make up with other labour. We reckon that in a full day we should get eight hours' work (eight hours is quite the extreme), but I should be satisfied with seven for children. In winter the day is shortened, and there is no dinner hour, but just time to take a meal.

[Mr. Matthews on returning the above statement revised, writes:—"I have carefully gone through "them (*i.e.*, notes or statement) with a very intelligent "neighbour of mine and a large employer, and we "quite agree to the substance of them as they now "stand."—J. E. W."]

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* This statement was not returned from revision in time to be inserted in its proper place as part of the Norfolk evidence. It should come next after No. 32 *sup.*—J. E. W.

† This sentence added on revision.—J. E. W.

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165. The following letter to the Rev. T. Hutton, to judge from the appearance and spelling of the original, is from an uneducated person, probably a working man. Suitable means were employed to find out by whom it was written, in order to learn to what weight it was entitled, but without success; the writer, perhaps from fear of giving offence, or for some other reason, being unwilling to let his name be known, as would appear from his not giving it at first. A large farmer, however, in the parish of Whittlesea, personally known to Mr. Hutton, and who employs gangs, stated to him his belief that the letter "honestly expressed the views of the writer," and it appears to be written with care, and with some knowledge of local facts. Some comments upon it by the farmer in question are proper to be added, and are given in the letter from Mr. Hutton to me printed after it.

166. *Letter to the Rev. T. Hutton, Stilton.*

Sir, Coates, Whittlesea.

Excuse my poor attempt to say a few words about the gang system as caried on at the present time. There is about 200 children of both sexes and all ages goes in the gangs to work from 6 years up to about 14 or 16 years. The youngest gets about 5*d.* per day, and the oldest about 7*d.*, and the average charge to the farmer is about 15*s.* per score. Where there is large (families ?) these poor children is often the only part of the family that gets work. It often happens at the time they are employed the poor man is out of work, so that their poor earnings is all there is for to live on; indeed half the work is done by the children in these fens, and those that sees them go in a morning think they are like so many little slaves, and the drivers is not much better. The poor children, as young as they are, always knows whether it is piece work or not, as they say when it is by the

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piece they are not allowed to (stop ?) one moment to rest. Take the case of a family that I know, man, wife, and 5 (or ?) 6 children ; man in constant work all winter. Man gets 11*s.* per week ; the oldest child 7 years. What can they do with that small sum to feed (and ?) clothe seven people on 11*s.* per week if the children did not assist them ? The two poor oldest adds nearly 5*s.* per week, which is a great deal to them. The great evil is allowing the children to mix. They could just as well go the girls separate and the boys separate. Their language is most shocking to hear. All say the system is bad, but how is it to be altered without an Act ? The poor factory child is protected much better than the labourer. It is surprising how well the poor children bears the cold and wet weather, and how much rather they would go in the fields than they would work in the house ; in fact they never like the confinement of indoors after.

I am,
Your humble servant,
A. Y.

167. *Letters from the Rev. T. Hutton, Rector of Stilton.*

(Letter No. 1.)

MY DEAR SIR,

* * * He (the farmer referred to above.—J. E. W.) thought he (A. Y.) had put the ages too low, that the average age was from 8 to 14.

"If he (A. Y.) meant the 200 children for Coates alone, he thought the number too high, but if for the whole parish of Whittlesey, of which Coates is a hamlet, the number ought to be 500 at least."

Yours, &c.
J. E. White, Esq. THOS. HUTTON.

(Letter No. 2.)

MY DEAR SIR,

IT is alleged by many whose opinions are entitled to respect that the gang system is an organized form of juvenile labour which is indispensably necessary to the cultivation of fen lands. The reasons assigned for this are, first, the sparse population of the district as compared with the extent of arable land ; and the second, which is probably much the stronger reason of the two, is the circumstance that these lands are much more prolific of weeds than the high lands.

I still, however, adhere to the opinion which I expressed at the Social Science Congress at York, that children under a certain age ought not to be permitted to be employed in gangs at all, and that mixed gangs of boys and girls ought to be suppressed. They are fearfully corrupting and demoralizing, and in every way as indefensible as I believe them to be unnecessary.

Field work as a regular employment for *girls* is, in any case, most objectionable. It makes them rude, rough, and lawless, and consequently unfits them for domestic servants and domestic duties, and consequently disqualifies them for their future position of wives and mothers.

There is in these villages a shocking want of modesty and self respect amongst very many of the women and girls. Circumstances come to light from time to time of the grossest character, such as one would only expect to meet with in the very worst slums of our worst towns. I think there can be no doubt that this is mainly attributable to the gang system.

I do not think that it would be enough for boys and girls to work in separate gangs. The ganger in charge of the girls ought to be a woman, and proper security should be taken for her good moral character, and she should be required to return with the children from the field to their homes in the evening. If the boys and girls employed in the same field or in the same locality are permitted to return home promiscuously without any moral supervision, the separate system would lose more than half its advantages.

I has been suggested, and I think the suggestion is well worthy of consideration, that gangers should be required to qualify themselves for their office by a licence or certificate of character, to be signed by the clergyman of the parish and two respectable ratepayers and countersigned by a magistrate, and of course with proper penalties annexed for its infringement. So far as my information goes the gangers, in point of character, are below the average standard of the labouring class to which they belong. The best men, I am informed, dislike the employment; whether they do not consider it sufficiently manly I am unable to say.

With regard to the education of gang children I am of opinion that an alternate day system would be be better adapted to field labour than a half-day system. Regular attendance at school on Mondays, Wednesdays, and Fridays, or even on the morning half of those days, would be an immense improvement upon the present state of things. I really think some plan of this kind must sooner or later be extended to the whole of the rural districts if we are ever to meet the educational requirements of the country.

A few weeks ago I asked an American general who has taken a very prominent part in the various philanthropic movements of his country for nearly 50 years past, I asked him, "What per-centage of persons in "the New England States were unable to read ?" He replied, "*No per-centage at all!*" There the law will not permit parents to educate their children in the streets, lanes, and gutters of their towns and villages, nor will they allow them to be converted into miniature machines for the production of wealth before they have been taught the simplest elements of knowledge.

In this parish education has been within the reach of the poor for the last 50 years, and how much longer I am unable to say. We have had a national school in operation for more than 20 years, and yet the number of men who signed the marriage register with marks the last 10 years was only 4 per cent. less than it was 100 years ago !

We have efficient teachers in our parochial school, admirable school books, and every requisite, such as could not be procured for love or money when I was a boy, and all for one penny a week, and yet the ages of the children in the first class are evidently sinking year by year, and only a fraction of the whole are learning the art of reading sufficiently well for it to be of any permanent value to them in after-life.

Surely some further curtailment of liberty in this matter of national education would not be incompatible with the true advancement of freedom.

Yours, &c.
J. E. White, Esq. THOS. HUTTON.

168. *Mr. Alfred Adney*, surgeon, Whittlesea.—I have been in practice here 13 years. The greater part of the population (about 7,000), say quite two-thirds, are of the labouring class, and have no employment but in agriculture. My practice does not lie amongst the parish poor as such, as I am not medical officer of the union. Still I see enough of the poor in my practice to know their condition. From my experience there is no doubt that they suffer considerable injury from the exposure to cold and fatigue in the course of their employment as carried on here, especially from this exposure at too early an age. It must be injurious for children to trail about in the gangs so many miles and so young as they do here, ill fed and ill clothed as they are. Indeed the way in which gangs are worked here is, I consider, really cruel.

Children are sent out to work in them very young, sometimes as young as 6 or 7 years old, and gangs often have to go as far as up to six miles away, and in one direction they go as far as seven miles. They very seldom go less than three or four miles, except when they are working in the "fields" round here. Of course it is hard for children to get up so early as they must and start off, especially knowing what distances they will have to go ; and they have sometimes to be literally driven out to work, the mothers beating them to make them go, or saying that they will not give them food if they

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do not go. I saw a bad case of this kind not long ago. It was in the last mangold pulling time, which comes late in the autumn or in the beginning of winter, when one morning before it was light I heard a child crying in the street, and looking out of window saw a child whom I knew, then not 6 years old, running away and the mother running after it, and heard her threatening it, saying that she would beat it, &c., if it did not go to work.

Taking into account the kind of the labour which is done and the distances travelled, I am of opinion that a boy ought not to work in a gang till he is 9 or 10 years old, and girls not at all if it could be helped, and that no child under 12 or 13 years old should work more than 8 hours a day, including the time spent in walking to and from work. At any rate, girls ought not to be sent out so early as boys. Just about the age of from 13 to 15 is an especially delicate time with females, in fact the most critical time. At certain periods they require especial care, and at such times exposure to wet and cold is specially injurious to them, and may cause serious checks. But they are obliged to be out in all weathers without regard to the state of their health. No matter what the weather is, they must go if the gang goes, and they often have even to start in the wet, as I have seen. The ganger must not lose a chance. When girls get older they can judge when their health makes it suitable for them to go, and can suit themselves.

In the part of the country in which I used to live the labourers did not think of sending their girls out to field work, though they were not at all better off than men are here, and the state of their homes very distressing. Still they managed without. Here some of the families earn a good deal of money, some perhaps 30*s.* a week, but still they are very poor. They spend the money badly or waste it, are dirty and untidy, and pay no attention to their homes. They simply eat and drink, go to work, then eat and drink again, and so round.

The gang masters are frequently lazy men of indifferent character, who prefer keeping a gang to working themselves, and often use roughness to the workers. They keep a stick, and use it; it may sometimes be only their walking stick. Still they must have a stick to make the bigger ones do their work.

The sexes should certainly be kept separate; there is no doubt of that. It is most indecent as it is now, with boys and girls of that age out all day, always together, and with no hedges or concealment of any kind. Nature must be relieved, and the workers just drop out for this, and then the boys laugh at the girls.

The boys, too, are sometimes rough with the girls. Just lately one threw a stone at a girl in his gang and nearly cut her eye out, though she has not quite lost the sight; he was sent to prison for a fortnight for it, and therefore it must have been something malicious, and not a mere accident.

If there were any restrictions on gang work the farmers might complain and say that they could not get their land cleaned without it, but I do not think that they would be justified in making such complaints. The present way is, I know, the cheapest, and as far as the work itself goes, perhaps the best way of doing it, but it is not a proper way.

169. *William Hill*, age 15.—I did not go to a gang till I was 8 years old, but I had been out at other work (*vide inf.*) since I was 5. There were boys and girls in the gang, some very little, 5 or 6 years old. Some of these had brothers by the side of them, who could help them a bit when there was more than they (the little) could do. There were boys bigger than I am now, but no grown up people. We have gone as far as six miles to work, and often five; we used to beg a ride on the road when we could. Our time for starting was 6 a.m., and we left off at 5.30 p.m., and got home about 7. I got 6*d.* a day; I don't know what the master gained, of course he wouldn't tell us. One of the best workers was put outside at each end, a boy at one and girl at the other, to keep the others straight.

The man had a willow stick and beat us; I catched it as much as any. He would beat the girls too, and shove their noses in the ground, *i.e.*, shove them down. One day he pushed four boys into the dyke, because they had been playing at hiding stones under the earth and finding them while he had gone away to look for more work. I have seen him push them in at other times, and the boys up to their chest in water. One day the big ones dyked him, and then ran away; he wanted them to work in the rain. He did not summons them, but beat them next day. I never saw him push girls in the dyke or kick them, but I have seen him kick boys, and one boy's father said that he would summons him for it.

He used blackguard language and swore, but would not let us if he could hear it, but he could not always. He would not let the boys serve the girls bad, or interfere with them, or quarrel with them. The boys may quarrel all they like themselves, and he say nothing. In coming home he would drive all afore him, but the boys and girls could get together. He would not let you bathe. While I was with him he was in gaol twice, once for a month for knocking his wife about, and once for owing some money, I think. His wife minded us while he was away, and could make us work and use the stick as well as he. He has been in gaol once or twice since; it was for knocking his wife about I expect. I have known her also go in twice; the last time was for kicking up a row. (See Nos. 250 and 251.—J. E. W.)

When I first went out to work, at 5 years old, I had to tent horses and cows, to see that they did not get into the pound for straying into the grass and wheat. I had to tent them from 6 a.m. till 6 p.m., and it was two miles from home, and I have been kept late at night. I used to go to sleep sometimes, and once the master found me asleep, and drew me along in the water with a hemp rope up the big river for it. Father said that he would summons him, but he gave father something and they made it up.

I went to day school a bit, and to night school since I have been in service here, but cannot read. But it wasn't the master's fault; I used to play truant.

170. *Elizabeth Neale*, age 17.—I worked in a gang (not that described just above.—J. E. W.) part of three years, and have now been in service three years. When I first went with the gang I was 11. Seven of the least of us girls were put for a fortnight to go with a woman. We had to walk five miles each way. I was very tired. Since then I have had to go as far as six miles and a half out; that was our furthest, but five miles was a common distance. We never went in a waggon, except to one farmer seven miles off, near Ramsey, who sent to fetch us in the morning, and to bring us halfway back at night. When we went far the little used to go the same as the big. Some of the little ones would take hold of hands to get along. Some were very little, some down to 7, 6, and 5 years old. I knew their ages, because I heard them say; the master used to ask the ages right away through. We used to walk fast in going, very fast sometimes, even running, because the master said we had to be at the ground by 6.30 a.m. The master had a donkey and would trot, and we had to keep up with him.

We used to start from the master's house at 6 a.m., and I left home at 5.45. Our time to leave the ground was 6 p.m., wherever we were, and we would get home by 8, or if we were near by 6.30. We used to sit down or play on the road. Some used to get home at 9, and later. We had half an hour for breakfast and an hour for dinner. We never worked in the dinner hour. If there wasn't a place to play you must sit down. Some of the bigger girls did sewing or crochet, &c. I never saw any reading.

There were only boys and girls, no women, only three boys being big, say 16 or 17 years old. The gangmaster and his son once had 99 working in the same field in two parties. I got 5*d.* a day when I first went, and 6*d.* when I left.

Father would not let me go in winter or wet weather or when the corn was high and wet. If it came on

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too wet we came home, but at times a gang is wanted to work on in the wet, and some of one master's children ran home. I went mangold pulling once, but could only do it two or three days, and told father that I couldn't; I was very delicate. Some of the children were crying with the cold. Mother gave me gloves for it. Weeding is the worst work for stooping.

The master was kind, and spoke kind. If the girls deserved he hit them as well as the boys. He never threw any one in the dyke, but I have heard of that being done by the man in another gang.

171. *Letter from Mr. Geo. Moore Smith.* (*See* inf.)

SIR, Whittlesey, 18th May, 1866.

I BEG at your request to forward to you my opinion of the gang system.

The system, I am convinced, is an absolute necessity in a rich agricultural district with many small holdings and of great extent, such as the parish of Whittlesey, which contains 25,000 acres, with a population under 7,000, and the parish of Thorney, which contains about 18,000 acres, and a population by last census of 2,219. Notwithstanding its present mismanagement and the occasionally gross immorality of the gangers the system educates a fine, hardy, healthy set of men and women, with a physical development which makes the former first-rate soldiers and navvies, capable of any amount of fatigue and endurance. This district supplies a great number of navvies notorious for their great personal strength, and soldiers who would be a credit to any army. There have been forty men from this district at one time in the Guards alone.

Without alluding to general indecency attending mixed gangs, I may simply say that the poor children, the young girls especially, are generally far too much under the supreme power of the ganger. This ganger is occasionally nothing but an immoral brutal tyrant, without any supervision or control whatever. In this district the ganger engages the children, and then agrees with the farmers as to the work to be done. It thus happens that the gangers have the monopoly of the children's labour, and I have known several indecent assaults hushed up because the parents knew that the gangers were so in league that to make any complaint would be simply to deprive all their children from earning their bread. The farmer goes now and then to visit the gang, but in this flat fen country without hedges, and simply ditches, his approach is discerned long before he can either hear or see the indecency or immorality that is taking place on his farm. Of course the grosser acts of indecency only take place where the difficulty of detection is the greatest. The uncontrolled power of the ganger allows him, if evil-minded, to ill-treat and rob the children at pleasure.

About the year 1848 I was requested by the chairman of a farmers' club which then existed here to inquire into the working of the system, and with the aid of a labouring man was enabled to collect a great deal of information among the poor, on the understanding that their names should be concealed. I found the system bad indeed, and the evils arising from the mixed gang to be great in the extreme. I made a report, which was adopted, and it was resolved that mixed gangs should be abolished, and that the girls should be attended by a woman. The gangers were, however, so opposed to the alteration, that the farmers were eventually talked over, and the old system revived.

There are great wrongs attending the present system, and I respectfully submit the following suggestions for the remedy:—

1. No person to be in charge of a gang without being duly licensed at a petty session on a certificate of good general character and conduct, such license to have endorsed upon it regulations for the conduct of the gang (for example, see the endorsements on alehouse licences).
2. Mixed gangs of boys and girls to be strictly prohibited.
3. Every female gang whenever engaged by a man to be accompanied by a duly licensed woman. No girls to be permitted to enter high wet corn in weeding.
4. Sickly children and those generally of very tender years not to be employed in gangs at all.
5. The ganger to preserve order and decorum both personally and among the members of the gang.
6. To pay the children or their parents by 8 o'clock in summer or 7 o'clock in winter, on some certain day in every week, at his private residence or some other private place, and never at a tavern, alehouse, or beerhouse.
7. The time of work of the children and the distances over hours to or from work which the children are required to walk should be regulated.
8. Petty sessions to have usual power of punishing for breach of regulations, and of suspending or withdrawing license.
9. Petty sessions to have general jurisdiction over all questions of hiring and service, wages, &c.
10. Petty sessions to have power alone to punish for misconduct by the gang children.

I have been long of opinion that if the poor parent knew that the law protected his child, and the ganger knew well that the law would punish his misconduct, all the evils of the gang system would in a great measure disappear, while its good would be preserved.

I am, Sir,
Your obedient servant,
* GEO. MOORE SMITH,
Clerk to the Justices for the Liberties of Whittlesey and Thorney.

J. E. White, Esq.,
Assistant Commissioner,
Children's Employment Commission.

172*a*. *Statement furnished by Rev. W. B. Hopkins, Wisbeach.* (*See* inf.)

THE agricultural gang system consists of two branches, which may be described as public gangs and private gangs.

1. By "public gangs" I mean groups of workers got together by a man called a "ganger," who is prepared to take the gang to any work in any parish where work is for the time being offered. The gang has thus only a casual connection with or dependence upon the actual employer of its labour.

2. By "private gangs" I mean gangs organized on a single farm, and composed almost exclusively of women and young persons connected with men usually employed on the same farm, and placed, whilst at work, under the supervision of a labourer chosen for his good character and skill.

The latter gangs are the best specimens of this organization of labour, and need little, if any, legislative interference. The ganger is generally a man of good character, and the gang is protected by the arrangement which makes the ganger responsible for something more than the actual performance of a given piece of task work.

The public gangs, on the contrary, need regulations of some kind. The ganger may be a worthless fellow, remarkable for nothing but a certain tact in collecting young people together, and extracting from them a sufficient amount of work. In fact he is sometimes a man to whom no one will give regular employment. No responsibility is either felt or acknowledged by the employer of these gangs, and he looks for nothing beyond the completion of the task; nor does he suffer any inconvenience from the turbulence and disorder of young people, whom he may seldom, and in some cases never, see again.

Here I take leave to remark that neither in the interests of the employer or the employed is it desirable to contemplate any legislative interference which might have the effect of discouraging or prohibiting the labour of females or young persons in the fields. I may safely leave the employers to state their own case, but I wish to add a few remarks on this question as it affects the employed.

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* See also No. 251.—J. E. W.

It is too obvious to need any argument or illustration that the agricultural labourer, with a large young family, urgently requires every legitimate addition which can possibly be made to the family earnings. Every attempt, therefore, either to regulate the labour, or to promote the education of his children, to be successful must take account of this universally felt necessity. Whatever labour can be obtained from a child without injury to his physical development, or his moral welfare, or his mental progress, ought surely to be encouraged. Unless this is done the parent is not only placed in a position which tempts him to oppose the best interests of his children, but is also in danger of regarding his children as burdens and incumbrances, and feels himself driven to endeavour by unlawful means to escape from a thraldom which cripples his energies, and makes his very existence intolerable, *e. g.* by deserting his family. It is to be feared, however, that some philanthropists lose sight of these obvious considerations, and in their eagerness to escape from one set of evils, are rushing headlong into evils of no less magnitude and moment. In order to illustrate these remarks, I append extracts from a letter addressed to me on this subject by a working man, and father of a family. (*See* below).

In considering the general bearings of this subject it must not be overlooked that public opinion and good feeling, and the growth of a better education and home training amongst the middling and smaller yeomen and tenant farmers, are doing much in some districts to mitigate and gradually remove the evils of the gang system. I believe that this has been the case in Wisbeach and the neighbourhood. Parents will no longer tolerate, and employers will not suffer, improprieties and loose conduct, which some years ago would have called forth no remark, or might have been the subject of gross and untimely ridicule. It is obvious, also, that should these good influences increase (as we may not unreasonably hope they will), they must be far more potential than any legislative interference. Nor can it be denied or doubted that the improved education given in National, British, and Union schools has acted upon the classes whose children are sent to middle schools; and if progress be maintained the influence of this kind of pressure from below will become still more marked. Whilst, therefore, due care is taken to prevent such evils as may be preventible by legislation, the action of these moral forces should be encouraged and developed as far as possible. The magistrates, clergy, and resident gentry may, by quiet working in their several spheres, do something to accomplish this desirable object.

I will now add a recommendation of such measures as have appeared to me practicable and possible:—

1. Children of both sexes under 8 years of age should be absolutely debarred from employment in gang labour.

2. Children between the ages of 8 and 13 years when employed in gang labour, should be required by law to attend school two days in every week whilst so employed. The employer and the parent might both be made liable to a suitable fine in case this regulation were evaded or disregarded.

3. In the case of public gangs, the ganger should be bound to produce certificates of character satisfactory to the nearest bench of magistrates, and to obtain from them a license, which he must show (whenever he is in charge of a gang) to any one requiring to see the same.

4. The separation of sexes should be rigidly enforced (on grounds of decency alone), except in the case of a man and his wife working with their own children or near relatives.

W. B. Hopkins, B.D.,
Chairman of the Wisbech Board of Guardians,
Vicar of Littleport, and lately Vicar of Wisbech.

172*b*. *Extracts above referred to.*

W. B. Hopkins, August 24, 1865.
Dear Sir, Long Sutton, Lincolnshire.

As I have great sympathy and pity for the poor children that is sent out so young to earn their daily bread, I know well they would be much better at school; for I know the loss of not being an educated man myself. * * * * * *
But I can assure you it is not a one-sided question about the gang system, for I know well the poor are as much in need of their children's little earnings as the farmer is of getting the labour done by the children. For what is the farmer's labourer's wages to fill and clothe a family of six children on 10*s*. a week? this being about the regular wages of late; and there's many families of six children under 14, or I might say 12, years of age. What can the poor creatures do with it? Will the farmer give a man that is burdened down with a large family of small children any more than the man who has only got one? No, he must do as he can with his 10*s*.

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Now to the system of working in gangs. The evil lies in the bad management. The fact is, one has as much need of the money as the other has of labour. Then, I say, let the boys go by themselves; and the girls, if allowed at all, go under a motherly and christian-like woman. But I say keep the girls at home if possible; and let men rule over the boys that have got a fatherly and christian-like feeling, and not unreasonable, unjust, and ungodly men, as most of them are that are over a gang of children. I say keep them out of the corn when wet, by all means. I have seen the children, I may say, wet above the knees in a morning by 9 o'clock, and in that state all day if the weather did not dry the clothes, as we may call them. With great sympathy I remain, yours most truly,

John Moyes,
Potato dealer, Long Sutton.

173. *Letter from Rev. W. B. Hopkins.*

20, Cambray, Cheltenham,
Dear Sir, October 23, 1866.

In reply to your letter of the 19th I can assure you that the views which I have expressed, somewhat at length upon the subject of "agricultural gangs" have been formed by several years' observation. I have seen the working of the system in the neighbourhood of Wisbech, and have received communications from the clergy in the neighbourhood, and especially from a clergyman who was curate of ————, residing on the confines of Wisbech High Fen and near to the Thorney estates of the Duke of Bedford, which have been largely supplied with labour by means of gangs from Whittlesea and the neighbourhood of Thorney Bar. The gentleman of whom I speak made careful inquiries amongst the young persons actually employed in the gangs, as well as amongst the farmers and gangmasters. I have also conversed and corresponded with many of the clergy in Lincolnshire, Huntingdonshire, Cambridgeshire, Northamptonshire, and Norfolk.

As chairman (for eleven years) of the Wisbech board of guardians I had many opportunities of intercourse with the leading agriculturists of the neigbourhood, and I have availed myself of practcial information derived from them. I have also in conversation gathered the opinions of corn merchants who have extensive intercourse with employers of labour. * * *

It will also be readily understood that I have read with interest such articles and correspondence upon this subject in the press as have come within my notice.

I cannot, however, pretend that I have studied this subject specially or systematically, but I have always bestowed upon it the same attention and thought which I felt it my duty and pleasure to give to education and other practical subjects which had any

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Cambridgeshire.

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b.

important bearing upon the welfare of the district in which I have lived and laboured for many years.

The subject, like many others of the kind, is attended with difficulty. But it can scarcely fail to do good to have it well ventilated. And I am sure it is very worthy the attention of all who are interested in the well-being of the labouring classes.

Believe me, &c.

J. Edward White, Esq. W. B. Hopkins.

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174. *Mr. R. P. Nisbet*, Thorney, agent to the Duke of Bedford.—In a part of the country like this, in which there is such a wide extent of cultivated land in proportion to the population, and lying at such a distance from it, it is almost a necessity that women and children should be largely employed in field work, to make up for the deficiency of men's labour. This parish contains an area of about 17,000 acres, with a population of only 2,219, nearly all of it in the village, which lies about in the centre of the parish. The only way in which children's labour can be made available to any extent is by working them under an overlooker in what are called "gangs." The right way of doing this is by means of a "private gang," in which only a moderate number are taken to work in the direct service and control of the farmer, and under the direction of one of his own men. The work is then very proper and suitable for the children, and they ought not to be excluded from it. Much of the work which they do, as, *e.g.*, hand weeding, would not be suitable for men.

But the other system, so general in this neighbourhood, *i. e.* that of "public gangs," is very objectionable. The children in these are in the employment of a man who contracts for work with the farmer by the piece or acre, or by the score of children, and pays his workers what he can get them for. On this plan children are taken about to work in much greater numbers, to much greater distances, and under much less proper supervision. One of the greatest objections to the system is that the gangmasters are often men who from their character cannot get good employment themselves. In fact these gangs are, so to say, a refuge for the destitute, both as to masters and workers, and as long as they are allowed to come from all parts and under no control I do not see how the general character of such gangs can be any better. Till quite lately there were two gangmasters in this parish, but I have such a dislike to the system that I stopped them by requiring that they should give up either their gangs or their houses. They preferred the former. The farmers thought it hard, and I have often thought since that perhaps more good would have been done on the whole if I had allowed these men to carry on their gangs here, as I could have thus kept some control over them.

If the gangmasters were required by law to obtain a licence from the magistrates it would do something towards securing proper characters. The magistrates would be able to ascertain if a man was unfit by referring to the police. I have no doubt that if such a law existed it would be carried out effectively, here at least.

Another objection to these gangs is the numbers of both sexes working together. They ought to be separated. There is no kind of work in which any difficulty would arise from this. The same amount of work would be done by a gang of boys working in one place, and a gang of females in another, as is at present done by the same number of persons working in two gangs promiscuously. It is very likely that as a rule a gang of females could not be put under a woman, owing to her want of power to control them as a man can; though a woman who has a gang in this neighbourhood is, I hear, fully equal to any man in this respect. But it would require masculine and unusually strong-minded women. The separation of the workers would, however, be a great benefit. I have myself seen boys bathing in the presence of girls of the same gang; big girls, say, up to 14 or 15 years old.

The nature of the soil also makes the work of gangs in the fen districts more necessary than elsewhere, owing to the greater number and quicker growth of weeds. Horse hoes are used as much as possible, but hand weeding is needed in addition. It is, I know, thought by some that getting an extra crop from the land makes it necessary to have more weeding done than would otherwise be required. But I believe that for this soil the five-course system is far better, and that the four-course system would be actually injurious, as under it the corn would run to such a length of straw. Nearly all the farmers in this parish employ the public gangs. One does not, but he has to employ Irishmen instead. Another gets the work done by women only, and some entirely or partially by private gangs.

Some gangs from a distance are carted here, the farmer sending his waggons part of the way for them, but so as to stop short of the toll bar. Waggons are not sent for the Whittlesea gangs I believe. The toll bar on that road is near here.

Where the population is in fair proportion to the extent of land, and is well distributed, gangs are not needed. This is the case with an estate which I manage a few miles west of Peterborough. There, instead of children, I have eight or ten women with a man to look after them. In the same way on an estate, also under my care, near the mouth of the Nene, though the population is very scanty, children are not wanted, because it is the custom for most of the women to go out to field work. I have had a wide acquaintance with farming as carried on in different parts of the country, and never heard of any gangs except in these eastern and one or two adjoining counties.

In certain other districts with which I am acquainted the scarcity of men's labour for field work has led to systems of female employment which are rather peculiar, *viz.*, the "Bondager system," and what may be called the "Bothie system."

In the north of England the bondager system is very much followed, owing to the scarcity of men to do field work in some districts, such as Northumberland. The yearly farm servants are required to find a woman or strong boy to do field work, &c. (boys are the exception, not the rule), such as hoeing and pulling turnips, spreading manure, &c.; also the barn work, such as dressing corn; and many other acts that men do in the south of England.

The bothie system has of late years very much crept into the south of Scotland, owing to the extra number of workers required for the cultivation of potatoes. Upon most farms there is a large sleeping room, with another room attached, where you will find 10 or 12 young women living (they are mostly from the north of Scotland). The farmer provides them with potatoes, oatmeal, and milk, and gives them so much money per week. Both systems are very objectionable, but I do not know how the farmer is to get his farm work done without either. The women are engaged by the farm servants (when they have no daughters of their own) for a term of half a year at wages which range from 4*l.* to 6*l.* for the summer half, May to November, and from 2*l.* to 4*l.* in winter; in summer they work from 6 o'clock to 6 o'clock, with an interval of two hours. I have often heard it remarked what fine, strong, healthy-looking women they are, and objectionable as the system is it is much more healthy for them than the lace making and straw platting of Bedfordshire and Buckinghamshire, &c., or the manufactories of large towns. They are very frequently the daughters of pitmen from the large colliery villages, who prefer field work to house work, and in fact house service is at a discount.

175. *Ann Shivers*, Thorney.—I saw a large gang of children pass by in a waggon this morning at 7.30, and two gangs yesterday. Here are two waggons of them just passing now (5.15 p.m.), look! They are coming from work a mile and a half beyond here, and

will ride as far as the toll gate at the end of this lordship, and walk on to Eye.

There has not been a gang like that, what we call a "tramping gang," that has to tramp about in that way, here for years. The farmers have little gangs of their own, and that takes the children up; one gang is under a woman; three of my children, two girls aged 10 and 8 and a boy 12, are weeding with one of these,—a set of 12 or 13 under a man. The age at which children begin all depends on when people like to start them. My children start at 7 a.m., and leave work at 6 p.m., having lunch at 9 or 10, and an hour at dinner. They don't seem tired or overdone, and make no ill cheer about going; it is not as if they had two or three miles to walk before and after their day's work; their furthest place is not a mile off.

> [On inquiry at the schools I was told that many children are taken away for work at certain times. In the girls' school the weekly average in April is 67, which is the highest, and afterwards falls to about 45; but the inspection is in April. In the infant school the limit of age is 7, but some children are taken from that for work.]

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176. *William Hills*, in charge of a gang employed by George Hunt, Nettlebank, Wisbeach.—We are working here in Wisbeach St. Mary's. Hunt is in another place to-day with about 20 of the bigger girls, boys, and women of his gang. I have known him have 40 working together, but 22 or 23 is a general lot. His rule is to be on the land at 7.30 a.m., and leave at 5.30 p.m., the same whether he takes the work or does it by the day. He is then paid by the score, I think. At dinner time they have a game of some sort, buttons or something, and we mostly contrive to get somewhere for them to run about. I get 2*s.* a day for looking after his children. I have to ferry them across the river in the morning, and back at night, and they pay me a halfpenny each for each way. Owing to the dykes we often have to go a long way round to get to the place where we are to work. Some of the children come further than others. Five or six of them have come four miles to-day. Some of the children get very tired, and can hardly get home at night.

Some children who go out are so little that they hardly understand work; a good many at 7 and 8 years old, but there are none so young here to-day. You can't depend on them under 9 or 10. When they are younger they are more trouble, they don't take any notice.

I don't have a stick, and don't like to hit them, and won't. I tell their parents, that's all; and if their parents are sharp with them they begin to cry. I won't have any bad language. It is a deal harder and more tiresome to look after the children than to work oneself. There are a wonderful sight of gangs across the water. Their rule is the same as ours. There are more children out now than there were a few years ago. People think they get them cheaper than other hands.

177. *William Phillips*, age 12.—I worked in another gang before. I have been six miles on to Thorney fen; I know it was six, there are mile stones along the highway. On to Wisbeach fen I have been four miles; we worked on that more than anywhere. We worked from 8 a.m. till 5.30 p.m. My money was paid to my elder sister. The master was kind to us sometimes, but hit us with a stick if we missed a thistle, &c.; he wouldn't let us be noisy. There was never a day without his beating some one, boys or girls, he didn't mind which, but only the little ones. If he had hit the big ones they would go home. We don't stop work for the rain unless it is very wet. Sometimes I catch a bad cold from getting wet, and feel it in here (throat), and sometimes it settles in my knee; mother calls it the rheumatiz. I first had that three years ago, and had been wet through five or six times a little before. I have felt it all over since, most in my left shoulder.

Can read a little (only short syllables); I learned seven years ago before I went to work, and could read better then than I can now. I always go to Sunday school.

178. *Sarah Fowler.*—Last year my daughter Sarah Ann here, now 14, had to go with a gang to Friday-bridge, six miles there and six miles back. She went two or three days at a time. That is the furthest she has been. (The girl says the same.—J. E. W.)

179. *William Jones*, age 9.—This is the third year that I have been out to work. Last night I got home (Guyhirn) at 7. This morning father called me at 5 before he went out, and I started at 6.

180. In the above gang were 8 girls, aged from 12 to 14, and 11 boys, one 7 years old, four 9 years, one 10 years, four 11 years, and one 12 years. The youngest went out the year before, *i.e.*, at 6 years old, and of the others (excluding two aged 9 and 11 whom I did not ask), four went out at 7 years old, one at 8, two at 9, one at 11. The boys and girls, with two or three exceptions, got either 7*d.* or 8*d* a day each.

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181. *Thomas Sharman*, late gangmaster, Guyhirn.—I kept a gang of boys and girls till a year or two ago. I was asked by farmers to take one up, but though I have had to do with one I do not approve of them. I have had some children down to 7 and 6 years old, but never any younger. I had 14*s.* a score, and as I had some big girls up to 15 or 16 years old at 10*d.* a day I was obliged to have some 5*d.* hands to make up. I reckoned 2*s.* 6*d.* of the 14*s.* for myself, and divided the rest amongst the children according to my agreement with the parents. I have paid as much as 14*s.* in a week to five from one family. I hardly ever had more than 20 at a time; a man cannot manage more. If I had less than a score I charged the farmer 2*s.* 6*d.* for myself and 7*d.* for each child. I put a little one between two great ones, so as to make the work even. Another gangmaster near here has, I believe, had 60 and even 100 in his gang.

My hours for work were from 8 a.m. till 5 p.m. Farmers wanted to make them from 7 till 6, but I said that it was not reasonable to get that from children working at such distances. I left one farmer on account of a dispute of this kind. I can tell you that when we had those long distances I was tired myself. Our work was chiefly about here and Wisbeach fen, but one or two farms that I used to go on Thorney fen were quite six miles from here, and almost all of the children were from here. When I have been on Wisbeach fen I have had children of two families from two miles beyond Guyhirn, and that would make six miles for them. One was a girl of 9 years old, and one a boy of 7 or 8. I have had some children from one place up into Thorney fen, a distance of 7 or 8 miles for them, but only two or three times. I would not have any further. I had them from different places. The other gangmaster that I spoke of used to go long distances into Thorney fen, up to six miles. When we went to Thorney fen I used to let the children sit down a quarter of an hour at the toll and eat instead of having it at 10 or 11 o'clock, as we did otherwise. We had an hour for dinner. I could not get children along if less than what I had, but I have seen younger from Whittlesea. I have bought sweetmeats, and said "Those that get there first shall have these." None of the gangs about here ride to work, but I once agreed with a farmer to let me have a horse and waggon for the children for a week's work, and I pay the toll. He was a very nice gentleman, and thought that the children would be fitter for work if they rode. They were singing all the way like nightingales, they were enough to craze you.

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As for pretending to keep them together or in order on the way home, you couldn't do it. If you speak to them on the way, they say "Oh! you have nothing to do with us now," and girls as well as boys would jump over a 10 or 12 foot drain, and say, "You old ——, you "can't catch us now." At work I used to have a stick, but did not flog them; I was summonsed once for it, but the other man had to pay. In coming home they would sit down and rest if they liked. When I have left Thorney fen at 4. 30 or 4 p.m. I have known it 8 or 9 at night before some of them were back in the parish.

The only harm to health however, I think, is from the wet weather, not from the fatigue. Boys should be 12, and girls 13 or 14 before they go out. But it would be a good job if gangs were put on one side, for one man (*i.e.*, one alone) that goes along with them can't stop their tongues.

182. *Ann Templeman*, age 15, Guyhirn.—I work in Hunt's gang. Yesterday we went to work at hoeing near the steam engine, which is five miles. We started at 6.15. a.m., and I got back at 7 p.m., coming straight home. Usually we start at 6.30, and leave at 5.30 p.m, I am tired when we go a long way.

183. *Mr. Medland Newsham*, Murrow.—I occupy a farm. The only great fault that I see in the gang system is that boys and girls work together. The harm of this is not during the work, but at dinner time and in returning home. It is the fact that boys and girls in a gang have been known to bathe together in the dinner hour. I have not seen it, but boys have told me that they have done so themselves. (To a note by me asking, "girls bathing too, or only boys bathing "before girls?" the answer is given:—"boys and "girls actually bathe together."—J. E. W.)

A gangmaster is generally a man of a rough kind. I know places to which gangs go distances of four and five miles to work. Some children are taken to work in gangs as young as 7 and 6 years old. I should like the Prussian system of all children being obliged to go to school up to a certain age.

(*Added by letter.*) There is one more case respecting the gang system which you ought to know, viz., that when the corn is high and wet the girls have often been so wet that at noon they have taken off their petticoats, &c., and hung them up to dry during the dinner hour.

184. *Thomas Licorice*, gangmaster, Murrow.—My father had a gang, and I helped him with it, and now have it myself; altogether I have been at it 25 years. I have usually about 35 children, boys and girls in about equal numbers, from the age of 7 up to about 14 or 15; I should think I had 40 last year, and not 10 of the same now. I don't want any great girls, nor yet any great boys; they get old fashioned. These youngest here, 7 or 8 years old, are not a bit too little; it's breaking them in, like a young horse. I get 8*d.* a day for each, and pay them from 4*d.* or 5*d.* to 8*d.* each; it saves trouble for me to pay them. I have fewer to-day, because I have lent some out at 8*d.* each.

They meet me at the bridge, and start off at about 6.30 a.m.; the farmer expects us on the ground at 8, and we leave at 5 p.m., but we were on the ground earlier, because we were nearer home. We go to different places, on the average about three miles, anything from one to four miles. The work is most tiring when there is not much twitch to pick, because they have to walk fast up and down the land, and that trails their legs off. The Whittlesea gangs always start exactly at 6 a.m.; they go two miles further than we ever do. They have been working close up to us in Thorney fen. To-day we went a mile and a half to work, and finished there, and then came on a mile and a half here, and shall have a mile back; we do not often shift in this way. Most come from Parsondrove. We began in the middle of March this year; I shall drop them at midsummer and work myself, and take them up again after harvest, and drop them again in November.

We always have an hour at dinner. The girls mostly sit and play five-stones. It's the best game as ever was; there they sit as quiet, and give no trouble. The parishes separate and sit by themselves. The boys play a bit too.

If I hadn't a stick I couldn't get on, but I only give them the promise of it.

185. In the above gang I found only 19 children at work, 4 girls and 15 boys. One girl was 8 years old on that day, one a few days over 8, one did not know if she was 9, the last thought she was 9. Two boys were 7 years old, three were 8, four were 9, four were 10, the two others were 13. One of the boys 7 years old said that he had worked the year before, and his master said that he had. One of the girls 9 years old said that she had been out nearly 5 years, that she left home at 6 that morning, and that all of them started at 6.30 their usual time, and left usually at 5. Most whom I tried could read. One of them being asked the meaning of the word "sorrow," which he was reading, said in an under voice "Please, sir, it's a bad word."

186. *Mrs. Lavender*, Murrow.—I keep a village shop, and in this way come to know a great deal about the people here. They are, I think, better off than in most places. Most families get meat more or less, I mean pork meat; a tidy family will buy, say, towards 3½lbs. in a week. The cottage rents are high, many from 5*l.* and 6*l.* a year, few at 4*l.* Most cottages have a garden, which is a great support, and in a good year goes a good way towards the rent. One of the poorest families that I know, a man, wife, and five or six children, spends 7*s.* a week in flour, the man's wages being, I believe, 11*s.*, but he gets a cottage rent free. They are gone to the next village now, but the mother grieves about it, and almost thinks of coming here to get her children into the gang. They could not get from there to here in the morning in time enough to start with the gang. I hear the gang go off about 6.30 a.m.

There were not gangs here when I first came. Their work is chiefly in the fens, where people cannot get women enough. I hear from the mothers that little children have to go as far as six miles to work, and the same back, and they complain of this. The children often come home wet; but I believe they are fond of the work. They reckon to have some fun. The greatest evil that I witness is from the boys and girls being together. Girls are wonderful loth to go to service, and it is, I think, from being brought up to this work.

There are some women with families who find it answer better to stay at home, but in general mothers would not be for doing away with gangs, I think, and would be jealous of losing their children's work. There is a fear about gangs being done away with, and they have named it to me There has been a talk about this since last year, and they had got an idea that it would be before Parliament. They will soon be here to me, when you are gone or to-morrow, to find out what you (J. E. W.) have said.

187. *Susan Wilson.*—I don't like gangs, because they trail such long distances. They go to Thorney toll, which is four miles, and further to some places (*named*) up to six miles; I hear from the children. Sometimes they have to jump the dykes. One of my boys went out when he was 7. He went of his own proposal, when his sister a year or two older went. Both got 4*d.* a day at first. After three years in the gangs she has just got a situation. That boy, now 10, is gone to a farm to-day hoeing with a man. In the gang they used to start at 6.30, and look to get to to work at 8 a.m. For dinner they took only bread and a little butter or cheese. Girls will come home

singing; if they didn't, perhaps they would feel the distance more wearisome. My girl never made any complaint of the gang.

188. *Mr. John Peck*, Parsondrove.—My brother, Mr. W. Peck, and I do not employ gangs on our farms here. We have done so occasionally, but we do not like them. Partly they are apt to slip the work, and partly we dislike boys and girls being mixed together. Usually by 14 or 15 years of age boys get other work, but sometimes older youths who cannot do this work in a gang. One knows what human nature is, and it must be bad for big boys and girls to work together in the fields.

The practice of working in gangs has increased in this neighbourhood of late years; I do not remember it at all in my father's time, though he had a company of women. One reason may be that much land is now cultivated which was then under water. Still men's labour is not scarce here. There is usually a surplus rather than not. Men's wages are 12*s.* a week, and occasionally down to 11*s.* and 10*s.* We reckon that a man should earn a stone of flour in a good day's work, and women should be half the price of men.

My idea of a gang is when 10, 20, or more women and children work under a man or woman who hires them, and lets them out again to a farmer. A number working together for a farmer is not a gang if they are paid by him; they are his own servants. A gangmasters contracts with a farmer at so much a head, or by the acre. He charges the farmer, say, 8*d.* a head for each worker, and pays them from 4*d.* to 8*d.* each, getting no direct payment for himself from the farmer. A gang is on the ground from 7 a.m. till 6 p.m., or perhaps only till 5. From 7 till 6 are women's hours at common farm work. There is no gangmaster living in this village, but some of the people work in the gangs of men living elsewhere.

My brother and I are exceptional instances of farmers here in not employing gangs, but there is nothing exceptional in our land or crops. To some extent it is a sacrifice of our interest to our feelings, but it is not so much loss on the whole as people would suppose; it is not really important. We have to pay more, but we get better work.

I should say that the board of guardians would decidedly expect a child of a family applying for relief to go to work if 8 years old, in some cases if 7 years old. It would depend on the kind of work to be got, and the constitution of the child. I have been a guardian for this parish many years, and have held several other offices.

The measures which I would suggest for the improvement of gangs would be that the sexes should be divided, and the gangmasters licensed. A woman would be competent to overlook girls. Women do do sometimes overlook gangs, and one did so lately near here, if she does not still. There would be no inconvenience to the farmer in such a division of the sexes.

It would most decidely be good for the children in a moral point of view if Parliament required the gangmaster to be a man of steady character, as might be done by requiring him to have a licence. This would be best granted by the local magistrates on certificate signed by, say, minister, guardian, overseers, churchwardens, or some of them, and respectable parishioners. There might be cases in which such persons were reluctant to interfere with a man and prevent him from earning a living as gangmaster, but in most parishes now people are sufficiently enlightend to work such a provision fairly. It is generally the most intelligent who hold parish offices.

There would be a difficulty in having double sets of children. There are not enough of them. The changes of weather too would cause a difficulty, the full number being required at certain times.

If I had any idea that Government were interfering too far I should not give any information, but of course they would only act so far as is required for the public good.

189. *Letter from Mr. H. Musson.*

National School, Parsondrove,
SIR, May 8, 1866.

IN the early part of April children leave for field labour in the gangs, numbering from *50 to 60 at least, to return about the beginning of November, their ages varying from 7 to 15, of both sexes.

The effect produced upon their instruction.—Their progress is very slow, their demoralized condition fearful; they lose in the six or seven months they are absent from school almost all they were taught while at school; their unwillingness to pay the least attention to either religious or moral instruction, their conduct to their masters and teachers both in the day and Sunday schools show plainly the awful effects produced from the gang system.

I have, &c.
(To J. E. White, Esq.) HUGH MUSSON, Master.

190. *Ann Hill.*—I used to leave my children at home and go out to work myself, but found I was in the losing hand; they made so much waste. Two of my girls, aged 11 and 13, are at potato setting now, but not in a gang, only a man and a boy or two. They have worked in a gang, but never should if I could help it. They have to go so many miles in that. One poor girl died, and I believe the gang upset her; she jumped a ditch and hurt herself. My girls were not corrupted or badly treated; all the objection I have to a gang is that they have so far to go; I have no other reason. This man don't swear from morning till night; his father was very different.

191. *Mrs. Hiblin.*—The gang is rough for girls, and the language bad. When they go four or five miles out they often get wet, about Michaelmas time is the worst. Sometimes they go to Thorney toll bar. Sometimes the little ones don't get back for an hour or two after the others, they can't walk so fast, and the great ones run on and leave them. Some children go at 7 or 8 years old, *i.e.*, as soon as they can get money; the parents only care for that.

192. *Mr. William Amos Peck*, Newton.—I am one of the largest farmers in this place. In this neighbourhood, the northern point of Cambridgeshire between the river Nene and Lincolnshire, gangs are not employed; the population is too distributed to get them together. Most farmers, I believe, do as I do, *i.e.*, employ a few women for weeding, &c. at 1*s.* a day, with a man to look after them. Girls are not suitable; I wish they did not go a-field at all; they are far better in the house. Field work unfits them for service and they will not go to service afterwards. Boys help top and tail turnips. It is scarcely fit for women to be out of doors at all for that, unless perhaps on a fine day. I find no difficulty in keeping the weeds down in this way if the land is properly cropped and not over done. We use the five course shift. The land is not heavy, but good friable loam. At the same time gangs of labourers would be of great service in this neighbourhood at certain times under suitable regulations, especially as farmers have experienced some scarcity of labour lately, and in my opinion females so employed are under no greater risk as to their morals than those employed as factory hands.

193. *Mr. Thomas Ream*, Newton.—Gangs would be very convenient at times when we are pushed if we could have them. I have a few women and boys with a man of my own to look after them. At potato picking I have had a gang out from Wisbeach, four miles off, all sorts, women, boys, and girls, some quite little, under a one armed man whom I paid 2*s.* a day. I sent a waggon half way to meet them, and half way back with them at night.

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* Mr. Musson afterwards explained that he was speaking of children from the whole parish, not from the school alone.—J. E. W.

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b.

It would be no benefit to the farmer to put down gangs, and I should be no advocate for that. Children are better at work than idle. There is not so much immorality in field workers, I think, as in towns. But if the view is to educate children, and not allow them to work too early, I should approve of that strongly. Children should not go to field work before 11 or 12 years old.

194. *Mr. Benjamin Stockden*, Fridaybridge.—I farm about 500 acres of my own and my father's. We could not possibly do with fewer children or half-time. Sometimes we have them come in gangs from near Wisbeach, four miles or upwards. Some who work in the parish come from distances of three, four, and five miles. Many have come from March into Elm parish, which joins.

One thing I do wish, viz., that Government would issue an order that girls and boys should not work together as they do. It is very bad, and there is no defence to it. There are usually from 15 to 30 in a gang, from 20 to 24 is a suitable number. Boys leave gangs when they get to 10*d.* or 1*s.* a day, *i.e.*, at about 14, because they are worth more at other work with horses.

Another thing I wish is, that Government would compel every landowner to build a sufficient number of cottages on his estate. There is a fair proportion of men in the parish, but not on the estates. There should be, say, five or six cottages on every 500 acres, 10 on 1,000, and so on. I keep 8 or 10 men regularly all the year round for 500 acres, which is a proper proportion, with four boys under 16 years of age.

For education the only way I see is to let the children leave work early and go to night school. But if I were to say that I would not keep children after 4 p.m., others would keep them; farmers don't hang together. But if the legislature were to compel this no one would object. We should get quite as much work out of the children, because now they know that they have to stop so long, viz., from, say, 7.30 a.m. till 6 p.m., allowing one hour for dinner, and they will not work so hard. There is never any overtime.

If I saw machinery improving I should use it at once. A steam plough will never answer. Some farmers use horse hoeing, or it (the hoeing) would never all be done. (But it ?) would waste ever so much more than hand hoeing, because the men do not drill straight; they do not attend properly. A drill has been tried for potato setting, but not found to answer. Potato crops make a good deal of work for children in this district. Little children help at setting potatoes and at taking them up again, and are in great request for these purposes in spring, say from the beginning of March, when fine, or April into the end of July, when they go to harvest, and from the 1st of September to the end of November, or even to Christmas if the weather permits.

I should not object to do away with the gang system altogether, that we might employ the children we have upon our own farms. It would make the men that have large families more in request, as now they have difficulty in getting a yearly place.

195. *Mr. Robert Pruden*, Fridaybridge.—I pay the wages for the employers on two farms, equal to nearly 1,500 acres, and farm a few acres of my own. I was parish constable 20 years till just lately. There were two or three gangs in the village 20 years ago, but now it is more the custom for the farmers to have their own labourers as overlookers of the women, girls, and boys, at the same pay as their other labourers. The reason of the change was that the gangers were often bad characters. I have known the children running about at night after the gangers, who were drinking, to get their wages. The worst point about gang work is the moral effect. There is no doubt that that is bad, because the boys and girls are together. If the work is to be carried on, the best thing would be to separate them. Children must work, because poor people can't afford to do without their wages to get a few clothes, &c. But children are not of much use for general purposes before 10 years old, except for certain jobs, though in many cases they go to work before they can earn scarcely anything. The labour of children might be very much more done without with proper management, *e.g.*, if the land was ploughed deeper and oftener, as this would destroy the weeds more. I know a farmer who in this way does with very little of children's labour. But this takes more horse power, and requires more capital to begin farming with. Steam ploughs are not used in this neighbourhood.

The distance to which children go to work is generally from half a mile up to three miles, say, on the average two miles. I know some this year that have come here five miles and a half. On the farms which I have to do with there is much more labour employed on the land than cottage accommodation provided by the landlords. Cottages are very scarce, and 1,100 of the 1,500 acres are ploughed. In the rest of the parish a rather larger proportion is ploughed. I had a gang out from Wisbeach lately on my land, and they would have to come four miles and a half.

A woman gets 1*s.* or 11*d.* a day, half a man's wages. A strong girl of 13 can get 9*d.*; the least get 5*d.* Boys till they are 12 or 13 get the same as girls.

196. *Mr. John Baker*, gangmaster, Upwell.—I have the largest gang here. Last week I had 40 in it, and next week shall have 50. The boys and girls are usually from 8 or 9 years old upwards, the boys up to 14 or 15, and the girls stay till they get husbands, and some after. Some go to service, but very few in this county. When they get to outdoors work they don't like the confinement of service, but like to run about the streets. When I have a large number like this I have to divide them. From 20 to 25 is as many as one man ought to look after; they are very tiresome. I am the only gangmaster here who has two sets like this. There are generally four or five gangs in the parish. Two or three men have given up lately, and two or three have taken to it. They may perhaps have from 20 to 30 each. I had a gang as much as 30 years ago, but the hands were older then, more grown up ones. They have turned out younger in the last 12 or 14 years, because there isn't so much work for the men. I have often known women and children get work, when the men can't.

I only take the little ones for charity. They count for one each; their mothers do part of their work. Farmers won't have them under 9, which is about as young as I generally use at any work; but some are brought to work younger. Last week I had chiefly older hands, as the work was hoeing; of the 40, perhaps ten or a dozen were boys, a few girls of about 12 or 13, and the rest girls of 18 or 20, and grown women. The little ones can't do that work, and when I do not want them they go to other jobs if they can, not to school. When I get to weeding I shall have more little ones.

I do not "take" work much, but do some, as hoeing, perhaps. Generally the farmer pays me 2*s.* 6*d.* a day, and I make a list of names for him of the hands at so much each, from 5*d.* up to 1*s.* a day. Girls get to look for women's wages if they are strong from 15 years old or so, some at 17, &c. I charge 1*d.* a week to each for getting the change for them. I have paid 16*l.* or 17*l.* in a week, and shall be paying 14*l.* now.

We are on the ground at 8 a.m., and leave at 6 p.m., or if far off at 5.30. All the gangs work about the same hours. I never make any overtime, unless if we have been stopped by rain, then we might stay a bit longer. If the work was nearer, perhaps we might; but it is too far off.

Most of my work lies three or four miles off down in the fens, anything from one to four miles. I pick up most of my hands about half a mile or so from here. They know the day before where we are going.

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I go on a donkey. One reason why little ones are not so suitable is that there are so many miles to trail. But I have had one or two children of 8 years old walk five miles out and five back. Years ago I have gone that distance, *i.e.*, 10 miles altogether, for weeks and months together. When I first started there were not other gangs as there are now, so I had to go further. None here go much further than I do now. Where there are gangs they must have a good way to go, because their work is in the fens where no hands live. Some houses have been built lately, but the cattle plague has put a stop to building. March is a wonderful place for field work. These gangs used to start from March bridge at 6 a.m., and leave off work at 6 p.m. I know about them, and have worked beside them many a time.

I won't have any rough language. I dare say they are bad enough when they get at liberty and out of sight; but at work you must be master, and their friends wish that you should. I keep a stick, and must hit some of them, one could do nothing without. I don't see the difference between this and what a schoolmaster does. No one knows the trouble and anxiety of keeping a gang. I dislike it worse and worse every year.

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197. *Mr. Charles Sharpe*, Outwell.—Gang work has very much increased here in the last 14 or 15 years; there are now three gangs here. It is an advantage to the farmer. Men won't go and pull weeds all day, and it would cost too much. Women used to be employed for this work, but they need so much looking after. I tried a set of boys, and found them do much better. A man can keep them in order more, and use a switch when needed.

But gangs as carried on now are very bad morally; but people have got so used to them that they cannot do without them. The harm of boys and girls being together is not so much at their work as in going and coming. When girls have been in a gang till 14 or 15 they are no good; they are corrupted from the first by the language, &c. I should very much approve of separating boys and girls, and farmers would, I think, agree to it. They would be ashamed to object to it, at least any men of a little education. It might be easily managed. The master must order a man to bring only girls or only boys.

I should like, however, to see girls stopped altogether; the work is not good for them. They get so wet that they can squeeze out it of their dresses. In the morning up till 10 o'clock or so it is as wet as possible in any green crop, but they must go in, and get dry as they can. The gangs don't stop for any weather if they once get down to a distance, unless it is very bad indeed. They do not like to go so far and have no money to take. On my land I had some shelter three miles from home, but shelter is rare. Usually it is all 'blea' fen, and neither sheds nor barns near. In another county I have noticed that the women hardly ever go out to work regularly as they do here, and the men there do not earn so much by 2*s.* or 3*s.* a week, yet the families here are no better off for clothing, &c. I fancy beer drinking has to do with this. Opium eating too is practised a good deal about here.

The gang goes chiefly out of the parish, say, a distance of three miles, often four or four and a half or five. The parish is about four miles long. They have to be on the ground at 8 a.m., and leave at 5 p.m. Children get from 4*d.* to 8*d.* a day, and pay 1*d.* a week to the man for finding them the work. It is not much to trail all that way and wear out their shoes and lay themselves up for. It is generally a lazy man that takes a gang; a really good man does not care to do it; but it is very troublesome work; more wearisome than thrashing all day. The man gets 2*s.* 6*d.* a day, besides the pennies from the children; he seldom takes work by the piece here.

The land about here is nearly all arable, and most of it in small holdings usually of not above 50 or 60 acres, and between 200 or 300 acres the largest. On the Isle of Ely side of the parish there are 525 acres in the hands of 100 occupiers, many of them from five acres down to a quarter of an acre. When the farms are small, farmers can't afford to fallow their land as the larger can, and so the weeds grow more. The profits of potato growing make people very eager to have a small bit of land. I have known 50*l.* made off an acre by potatoes in a year lately. I used to farm, but have let my land for several years past to six or seven tenants, but I still look after it.

The difficulty of children working only alternate days would be that at certain times, especially in spring, the work is all wanted to be done at once. But I think that the farmers would not object to the plan, as they would only pay for those who were at work.

198. *Elizabeth Upcraft*, Outwell.—My eldest girl, now 10, has been to work in a gang. She was too tired to go out much. Her father said he should not wake her for it. She started at 7 a.m., and came back at 6 p.m., and took bread and butter for dinner. Gangs are bad, because what one doesn't know another does. I am sure school is the best place for little girls. My eldest boy, now 17, is gone to work to-day at wheat hoeing with young women, girls and boys, and gets 10*d.* a day.

199. *William Cosins.*—Some years ago, having hurt my hand, I kept a gang, but after two years I gave it up. I did not like the language. I made a rule to fine for swearing, and got 2*d.* the first week, but there was no fine afterwards. I had some children as young as 6; they would come. The farmer gives the ganger 6*d.* a week more than a labourer, and the ganger stops 1*d.* from each child.

> [A late gangmaster was spoken of to me as an unsatisfactory character, and his answers to me did not impress me in his favour.]

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200. The following statements, from No. 201 to No. 212, both inclusive, are from written communications in answer to the printed Form of Questions, to which the numbers refer.

201. WHTTLESEY.

Population - 6,994. Acreage - 26,831.

(Number of gangs, five or six, averaging about 30 in each gang; about two thirds males. Gangs mixed. Summary from answers to Questions 1, 2, 9.—J. E. W.)

Manor House, Whittlesey,
October 16, 1866.

Sir,

I should have replied to your letter of the 26th September sooner, but have been endeavouring to obtain the newspapers in which my letters on the "gang system" appeared, but have not succeeded. As my opinion remains the same, I will shortly state to you my views on the subject. I am fully convinced the fen country cannot be properly cultivated nor the poor maintained without recourse to infant labour, and that it is as much benefit to the employed as to the employer. The town of Whittlesey is situate nearly in the centre of the parish, which is about seven miles across in the widest part, so the children cannot have to go more than three or four miles at furthest to their work, and I should say the average distance not more than two miles.

There is an exception to this, however. One of the gangs goes into the adjoining parish of Thorney, and has, I have no doubt, occasionally to travel seven or eight miles to their work. This is occasioned by the want of cottage accommodation on the Duke of Bedford's estate. The farmers consequently have to seek their labour from the adjoining parishes. The whole of the parish of Thorney belongs to the Duke of Bedford, and consists, I believe, of about 18,000 acres. Surely the fault does not lie with the "gang system" here.

There is no indisposition on the part of the girls to go into domestic service; and I know many girls that have worked in the gang who are now in highly

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respectable places, receiving high wages. I think you may infer that the treatment of the children by the masters is good when I tell you that I have been acting magistrate in this place for 41 years and do not recollect a single instance of any complaint having been made before me or the bench during that long time of undue severity to the children.

As to the moral condition of the children, I should say they are kept in *much* better order and discipline under a *proper* "ganger" than when running about the streets and yards and supposed to be under the eye and control of their parents. I am very doubtful if it be desirable to part the sexes. It often happens there are three or four children (boys and girls) of one family in the same gang with one provision bag only, and the parents, I think, would prefer that their children should work together that the elder may look after the younger. The boys and girls are generally ranged separately when at work. The boys spend the greater part of the dinner hour in play, such as leap-frog and jumping the dykes. I have occasionally seen the girls at needlework. I sent a man some years ago to go with the ganger and gang that I might satisfy myself of the conduct of both the one and the other. He did not know my object in sending him; and he assured me he had not heard a bad word or seen an indecent action the whole time.

The object I had in view when I published my letters was not altogether to uphold the present system, but to improve it. The name of "gang system" puts one much in mind of Newgate, and I believe if it were called the Agricultural Juvenile Industrial Self-supporting Association! it would lose much of its odium. There is a great deal in a name.

I now make the following suggestions:—

That the ganger should be appointed by the magistrates in petty sessions on the recommendation of —— inhabitants.

That no child should be admitted into a gang under 10 years of age, and no *girl* to remain in one after 13 years of age.

That the ganger should see the children home from their work.

I beg to remark that the above applies only to the gangs of this place, and more particularly to those I have employed. I know nothing how the system works elsewhere.

I have, &c.
Thos. Bowker.
(A Magistrate for the Isle of Ely.—J.E.W.)

202. WHITTLESEY (*see sup.*).

(1.) The farmer employs the ganger, who supplies the children at a rate per score (now 14*s.* per score), paying them 4*d.* to 7*d.* each per diem, according to age. There are three principal gangers and a few smaller ones in this parish.

(3.) From 7 to 14 or 15 years of age.

(5.) Anywhere in the parish; sometimes six or seven miles.

(13.) The ganger has often to supply children to different farms. He will then take one gang himself, send his wife with another, a man with a third, or sometimes, if only a few children are wanted at one farm, will send them by themselves. Sometimes the ganger takes a large number of children to one farm; the children will then be divided and sent to different fields, the farmer perhaps sending a woman or one of his sons to overlook those not with the ganger. The pay varies according to the season of year and demand. The ganger who takes most children in this parish *never pays more than* 6*d.* a day to the oldest child. This man had 65 children one day this week, with one man to assist him, and received 14*s.* per score.

The sexes ought to be separated. Only small gangs should be allowed, and the ganger should be a man partially disabled or an old man. There are plenty of men now on the parish receiving relief who are partially disabled, yet quite fit for superintending children. This would effect a saving to the parish and be a more equal distribution of labour.

Farmers generally are averse to women having the control of a gang, even of girls, as they have not sufficient control over them. Even some women object to have girls with them. They find they are more troublesome than if a man is over them. The older girls (say 16) are able to get work from the farmer direct, receiving women's pay.

During harvest time most of the children work with their parents.

The gang system cannot be entirely done away with. It is the only employment here for children, and is a great help towards maintaining themselves; and such work as weeding, &c. is best done by children.

C. F. Harding, M.D.,
Medical Officer of District.

203. THORNEY.

Population - 2,220 Acreage - 17,654.

(1.) The system exists in this parish, and there are perhaps five or six gangs in general use amongst the farmers, besides those constantly employed *privately* by some on their occupations.

(2.) I can give no decisive answer to this question. The gangs are generally mixed, males and females, and vary from 20 to 40 in a gang.

(5.) From two to five miles.

(13.) *Remarks.*—The labour of children is *essential* in all agricultural districts, especially so in the fens or other thinly populated parts of the country. However necessary, the *gang system* generally, so called, is attended with much evil which admits of easy remedy.

No children under 16 or 18 years of age should be allowed to be *farmed* out to labour by a gangsman or gangswoman.

The farmer should employ and pay all labouring children on his farm under his own or his bailiff's supervision.

If gangsmen or gangswomen are allowed to engage children for labour they should have a certificate from a magistrate to that effect, and not be allowed to employ more than 20 children in one gang; the amount of wages stated; and whose ages should be limited and classified.

I have farmed extensively for upwards of 40 years, and have *very* rarely employed a *public gang*, but on each farm of 500 or 600 acres I have kept in constant employment from the beginning of March to the beginning of November 12 to 15 boys and girls from 9 to 15 years of age (exclusive of a month *before* harvest and a month *for* harvest), who are supervised by a properly selected man, and this I have found a more economical and satisfactory mode of employing children than by having a large gang of them occasionally.

A man cannot judiciously overlook more than 15 or 20 children on agricultural labour. I have noticed the children in gangs generally look happy and cheerful both in going to and from their work, and I believe many of them take a pride and delight in agricultural labour, which is so far fortunate.

Wm. Whitting.
(A Magistrate for the Isle of Ely.—J. E. W.)

204. WISBECH ST. MARY'S.

Population - 2,000. Acreage - 9,606.

(1.) Three gangs of children are employed by three separate gangmasters.

(2.) From 70 or 80 to 150. By far the largest number is employed in summer.

(5.) Some of them go as much as four miles, or even more, but two miles, I think, is an average.

(6.) From 7 a.m. to 5.30 or 6 p.m. *on the land*; probably from 5.30 a.m. to 7 p.m. *occasionally* from assembling to getting home from work.

(9.) Together.

(13.) I fear the system I have described is debasing and demoralizing, because I think the gangmasters generally are men of no character or morals. Without the labour of children much land must go out of cultivation in the fen districts, but if each farmer would look out a careful, moral, and intelligent labourer, and select children for his *own work*, the serious consequences which now arise might be obviated. On one large farm I know a case where a sober, God-fearing, but nevertheless strict disciplinarian labourer had the care of all the children employed in this way, and where I do not believe the slightest approach to immorality or ill conduct was ever permitted, and where I verily believe it was a *positive advantage* to the children to work under him; and parents of the better sort knew this also, and were quite content to entrust their children to his care. This man did not fear the parents, and occasionally used the rod, but never cruelly. At the same time the children knew that they had it in store if they neglected their work, were idle, or used bad language.

(Questions addressed to Herbert Little, Esq., an employer.—J. E. W.)

205.* WISBECH ST. MARY'S (*see sup.*)

I hardly think that it is practicable to abolish it (gang system) altogether in this district, but the system should be modified and controlled, and I think regulations as to the following points would secure this end:—

1. As to the age of the children, that no child under 10 should be employed.
2. That no child should be taken more than three miles to work.
3. That no child be allowed to work more than eight hours or so.
4. That gangmasters should be licensed by the magistrates in petty sessions.
5. Some regulation as to education. In small parishes this might be that the children attend school half the day, or on alternate days; but this would hardly be practicable in the fens, where the population is scattered, the area extensive, and the schools in some instances several miles from the children's homes.

This appears to me the great difficulty in our neighbourhood.

Hugh Pigot,
Vicar of Wisbech St. Mary's and J. P. for
the Isle of Ely and for the county of Norfolk.

P.S.—I have made inquiry, and though I believe the gangmasters have been careless about the welfare, spiritual and physical, of the children, I have not ascertained that any gangmaster has been brought up on a charge of cruelty or personal immorality before either of the benches where I act for many years past.

(I had requested such an inquiry. See, however, Nos. 243–246.—J. E. W.)

206. UPWELL.

Population - 1,433 Acreage - 7,429

(1.) What I call public gangs are young people retained by a man called the ganger, who engages with the farmers to do such work as the young people can do on the land.

(2 and 3.) (The number estimated is extraordinarily large compared with the population, but is stated to be given only from "mere guess," and is here omitted. —J. E. W.)

(5.) One hundred yards to four miles.

(13.) The gang system appears now to draw the attention of the public. There certainly wants something doing with regard to the present system, where the gangs go together, all ages and sexes, until the boys get to be worth more per day than a woman; they then often find work with the men at such pay as their strength or knowledge can command. Undoubtedly their going together indiscriminately has a bad effect upon their morals, but as a poor person has nothing to sell but his or her labour they ought not to be deprived of the opportunity of making the most of it. At certain periods of the year such is the scarcity of labour that occupiers of land are glad to employ such as they can get, and often not such as they would. It frequently happens that work upon a farm wants doing and is obliged to be left undone from no other cause but the want of labour. I am myself situated near to a populous village, therefore can generally get my work done at the proper time, but not always. I do not often employ the public gangs, but engage as many as I can keep employed, and let my own foreman go with them to act as ganger and keep them in order.

It has been suggested by some, but certainly not by occupiers of labour, that a woman should act as a ganger over women and girls, and a man over boys. Such might do as regards boys, but I think no farmer would allow more than four or five women to go to work upon land without having an experienced man with them; I never do.

Now for the remedy. I suggest that boys and girls should not be allowed to work together in public gangs, nor yet boys and women, except such boys as are under 10 years of age, and then only in charge of his mother; but there are very few boys that go to work on land under 10 years of age.

I further suggest that before a man is allowed to act as a public ganger he should first produce a certificate, signed by the churchwardens and the minister of the parish where he resides that in their opinion he is a fit man to be entrusted with a gang of boys or girls, as the case may be, such certificate to be presented to the magistrates in petty sessions, who, upon being satisfied that he is a proper man to be entrusted with a gang of boys or girls, as the case may be, should be empowered to grant him a licence for one year free of expense, excepting it might be about 2*s.* 6*d.*, the clerk's fee for filling the same up; and without such certificate no man should be allowed to be entrusted with a public gang. These restrictions, I think, are not required so much where a man has his private gang, as he generally places his best man over his own private gang.

The worst feature to be noticed in the gangs is the many young girls from 14 to 21 years of age who would be much better at service, but the field work (they say) is more healthy than service, but I think the main thing is they have their liberty more, which is often employed not so well as it might be. There certainly wants a change in some way or other, but I am not able to suggest a remedy. One would suppose that the wages a girl may get at service would act as a remedy. Often their wages in money only is as much or more than a woman can earn upon the land in the year, and their board and lodging should be a consideration. But such is becoming the scarcity of domestic servants that people have to put up with such as they do not at all like. I generally keep two maid servants, but have been without a housemaid some two or three weeks, and do not know at all where to get one. This scarcity of domestic servants is not yet felt in higher quarters, but it undoubtedly will be, as the servants in high families generally first pass through such houses as mine, and with the increasing difficulty of procuring servants in the country such difficulty must be felt in high quarters as their present servants leave them.

I am, &c.
Henry West.

207. FRIDAYBRIDGE.

Population - 869. Acreage - 8,930.

(1.) There are no professed *gangmasters*, but gangs are formed when required on the owners' farms under one of the ordinary labourers on the farms. Formerly

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* For another Return from this parish, see No. 253.—J.E.W.

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there were *gangmasters*, but their ill conduct led to farmers giving *them* up and making other arrangements. During certain seasons of the year *all* children of the labouring class that can do anything are employed, but the *period* of their employment varies according to the character of the season.

(13.) Some of the evils that unavoidably attach to the gang system might be partially obviated by the compulsory (legal) separation of the sexes, and by insisting, as in the *factory* districts, on the children also going to school a certain number of hours during the week. The most feasible method of meeting the *educational* evil would be by *night* schools, say from 6 to 8 every evening, the farmers being required by law to let the children off from work at 4 o'clock in the afternoon. This, I think, would be acquiesced in cheerfully by most thinking employers of labour. Although by the employment of machinery and by the better culture of land children's labour would in a few years become less necessary, at least to such an extent as at present, yet it seems almost impossible in many cases to do without it. The great object therefore at first should be to *narrow its extent* and to *eliminate* from it as many of its *evils* as possible.

Samuel Charlton, M.A.,
Incumbent of Fridaybridge.

208. ELM (including Fridaybridge. *See sup.*)

Population about 1,800. Acreage - 1,1000.

Sir

In reference to the enclosed inquiry I have to state that the Rev. S. Charlton, the incumbent of this parish, kindly conferred with me upon the subject, and as I fully stated my views to him and understood they agreed with his own and the answers he intended to give, there is no need for my replying categorically to the same effect.

I will, however, give you my views generally upon the subject. In this part of the Isle of Ely some of the occupations lie wide of the population, and the best remedy for this evil would be for the landowners to erect more cottages nearer to the work. I am myself a considerable employer of labour (occupying about 1,000 acres).

With regard to the employment of children from 9 to 13 years of age, the work done by them is light and healthy, such as weeding, potato planting, thistle spudding, singling out root plants, &c. My own practice generally is to set a steady well conducted labourer as inspector over about 20 children; and I think I am justified in saying the children are well cared for and well conducted. The season of employment is three months before harvest and one month in the autumn. The proceeds of their labour are of great assistance to the parents, and their services indispensable to the farmer. With the exception of distance to and from work, where my plan is adopted there is little to complain of, and as I have already stated that can only be remedied by cottages nearer the work.

I am, &c,
J. E. White Esq. John Brown.
(Of Coldham Hall, a Magistrate for the Isle of Ely.—J. E. W.)

209. ELM.

Population - 860. Acreage - 2,200.

(1 to 9.) There is no gang system in *Elm* reduced, which is all I can answer for. 8,900 acres have been separated from Elm and formed into a new parish for ecclesiastical purposes, called Fridaybridge. The farmers in my parish sometimes employ children, but under their own inspection, and paid by themselves and led by their own labourers. Boys and girls work together.

(13.) I do not like the employment of mixed gangs of boys and girls; I do not much like, but it is unavoidable in these parts, field work for girls. Under the gang system, in the neighbourhood of my parish, I consider the mixture of boys and girls productive of great evil, and the system altogether pernicious.

Edward Swann,
Vicar of Elm.

210. PARSONDROVE.

Population - 800. Acreage - 3,825.

(5.) They seldom work in this parish, but chiefly in other parishes in the district. They travel to their work from six miles and under; in exceptional cases the distance has been up to eight miles. They are not much employed in this parish, but it is into Thorney and Wisbech fens they go so far. Their hours of work are from 6 to 5. If the work is distant they must start very early.

(10.) To healthy children the work is not injurious; to the weak it is destructive.

(11.) It takes them away from school, and in this parish is the chief hindrance to their necessary education.

(12.) To the moral condition of the children the gang system is injurious in the extreme. There is a license and liberty about it which quite unfits them, especially the girls, for proper discipline and control.

Neither of the ("two." From Question 1.—J. E. W.) gangmasters who employ Parsondrove children (most in spring and autumn, viz., 50; about 25 from each sex. From Question 2.—J. E. W.) are resident in Parsondrove. One of them was imprisoned for drunkenness a month since in Wisbech Prison; and the undersigned once saw a gangmaster going home at night drunk, and the children following him on the road and jeering him.

(13.) The undersigned is of opinion that in every case where children are employed in gangs the sexes should be separated, and that no gangmaster should be permitted to bargain for them and have control, but that one or more of their parents should superintend their work. The undersigned cannot imagine a more pitiable sight than is often presented by these poor children when returning on a wet night from distant labour, weary, wet, and miserable. He is also of opinion that they might be far more profitably employed, and more contentedly, but for this gang system.

Frederic Jackson, M.A.,
Incumbent of Parsondrove, in the Isle of Ely.

211. LEVERINGTON.

Population - 900. Acreage - 5,000.

(1.) About six gangs; some women, some girls and boys, and our own either women or boys, but never girls with the boys.

(2.) Gangs contain from 12 to 25 from March to July, and less in the winter months, say half.

(13.) Very much required to do the work, but should not allow a ganger to do work by the acre and pay the people low wages and work them hard to enrich himself. We always pay the party who superintends them, and give the children and women so much a day. He has to see they do a fair day's work.

212. *Letter in reply to further questions on the above and other here omitted answers.*

Seed Growing Establishment, Wisbech,
July 3, 1866.

Sir,

In answer to your inquiry I beg to say we may have more gangs in Leverington than six, consisting of all women, in parties of from four to eight; but of girls and boys, "separate or together," some six, and they are partly from the adjoining parish, Wisbech. The time in summer from their leaving home to getting home is 6 to 6, and the only time they stop is from 12 to 1 for dinner; in winter from 8 to 4, with same dinner hour.

Yours, &c.
J. Edward White, Esq. H. F. Sharpe.

213*a*. *Mr. John Harris*, National schoolmaster, Eye, Northamptonshire.—I was between 6 and 7 years assistant teacher in a large half-time school at Nottingham. I am of opinion that a system of the same kind, or as near it as practicable, would be a great benefit in a country village like this.

A large number of the children here work in a gang under the gangmaster and his son, boys and girls working together. A week ago there were 72 in it, 35 boys and 26 girls being between the ages of 7 and 13, and five boys under the age of 7. Now (31st May) the gang is much larger. Cases of children under 6 years old are rare. I know of two only from the school, but have been informed of others. Within the last twelve months a fine boy of 5 years old was sent out to work. He was an illegitimate child, and so they thought much of keeping him, and as soon as he could earn anything he must. When he first went, he used to be carried home from his work by the others. * On inquiry, I am informed on good authority that six or seven cases of children equally as young are to be met with in the gang, most of whom have never attended school. The children are paid for at so much a score. I see them begin to assemble at this corner at about 6.15. a.m., and start at 6.30, and see them come back about 6 p.m., not together, but in groups, as they please.

The school attendance is very much affected by the absence of the children at work, chiefly in the gang. It is my usual practice when a child is absent from school to inquire why, and to put the reason given against his name. Looking hastily at the attendances within a year past I see four weeks in which the numbers were respectively from 94 to 97. February is the fullest time. By now, May, the numbers have fallen to 70, and will drop till the end of July, when there will not be more than, say, 30 or so; then comes a month's holiday. The average number for the whole year has increased regularly in the time that I have been here. The gang work is not less, but the attention given to the school is, as I believe, greater. This may perhaps have led to the increase of number. In my first year the average was 60, in the next 70, in the third or last year 79.5. I give the numbers from the registers, and we look rather anxiously after these things. The school consists of boys and girls between the ages of 5 and 14.

The distances to which the children go to work are so great ("from half to five miles. Sometimes waggons meet them half-way in the long distances." From Mr. Harris' answers to printed Form.—J. E. W.) that they could not come to school for half days. If they came on alternate days, as there is no school on Saturday, each set could take three days in one week and two in the next, as they change in the factory schools from the morning to the afternoon. These five days in a fortnight would be sufficient to bring ordinary children up to the required standards of the Revised Code, but it could not be done with any less amount of time. There is no reason to doubt this possibility. Each standard represents a year's work, but the Government consider that it is only what might be reached in six months by a child of fair intelligence fully exerting itself; the margin is allowed so as to give every opportunity.

But if alternate days could not be got great benefit would be derived from two days a week, and if they could not be got then even from one, provided that the attendance was regular. Where children have been previously taught, one day a week regularly, especially with the help of Sunday school, would do much to keep up what they have learned. Sunday school alone is not enough for this, and besides is meant not for secular but for religious teaching. The one or two days regularly would do much more good than is now done by the present attendance of many with such long and irregular breaks, say by coming for a month and then being away for two or three. Many parents though professing and appearing to be really anxious to keep their children at school, still when the working time comes let them go off again. The attraction of the earnings is no doubt too strong for them. I have, however, known several cases, though these are comparatively rare, in which the children of labourers at 11*s*. or 12*s*. a week have gone to the gang only on Saturday, when there is no school, to earn their 4*d*. to pay their school 2*d*. or, with copy book, 3*d*.

I could arrange to take children in this way without interfering much with the rest of the school, and should mix them with the other classes. There would be some difficulty at first from the unruliness of the working children coming in thus, but that could soon be got over. If the gang children came regularly an assistant master might be needed, 89 being the limit of average number allowed to one master without the deduction of grant.

Of course in the event of children being required to attend thus for a limited time the standards fixed for them, and the payment in respect of them, should be modified as far as might be thought fair.

I do not see who there is in an ordinary village who would like to appeal to the authorities if the law, if any, about school were not attended to; it would be too invidious. It wants some one to do the same sort of thing as the factory inspectors do, *e.g.*, to send a child to school, as I have known done, if he finds it at work without having been properly at school. The employers are the persons who could most easily enforce the law, but they could not be expected to do it, at any rate as a rule, for, from what I have heard, farmers as a class are by no means in favour of education, *i.e.*, of the working class, but rather the reverse.

But probably if such a law existed it would, I think, be fairly kept without coming to the necessity of any one informing about it. I should call the parents' attention to it, and they would be likely to acquiesce in what was the law.

A book might be kept supplemental to the ordinary school register and relating specially to working children, and this might be looked at by the school inspector also.

For some further remarks I refer to the following letter written by me two years ago to a gentleman interested in the subject.

213*b*. *Letter from Mr. J. Harris, referred to above.*

National School, Eye, Peterboro',
REVEREND SIR, Sept. 14, 1864.

(The letter begins by referring to "agricultural "gangs.")

The work of village schools cannot possibly succeed so long as this iniquitous system is tolerated. I find that during* last year no less than 14 girls and 17 boys, in all 31 children, between the ages of 5 and 11 years were taken from school for gang work. In fact, the attendance is so affected by it that the average for each child throughout the school is only 12 weeks per year. What can be more discouraging to a teacher than this? Can 12 weeks at school eradicate the evils contracted during nine months' training in everything that is bad, not to mention other things? Impossible.

That gangs are an evil of the first magnitude in this locality no one can deny. * * *

Boys are taken from school to labour before useful acquirements have been made or good habits formed; girls are sent to work along with them who can neither read nor sew, who grow up without knowing how to clean a house or cook their food.

* * * *

Again, the importance of education is not yet universally acknowledged and carried out by the parents of the poorer classes. Hence it becomes difficult to persuade such people to avail themselves of its advantages, and to relinquish their prejudices. They want driving as gangs are driven. An Act of Parliament will, therefore, in all probability be necessary to forbid gangs and the employment of boys

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* This sentence was added on revision.—J. E. W.

* The average attendance in that year, as stated above (No. 213*a*), was 60.—J. E. W.

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under a certain age, say 12; also to compel parents to keep their children at school till they have acquired those rudiments of knowledge which are considered necessary for their future conduct and success in life, which is much to be wished.

I am, &c.

The Rev. Thos. Hutton, JOHN HARRIS.
Stilton.

213c. *Extract from Answers to printed Form of Questions by the above.*

(10.) Through working in wet corn and during inclement weather they suffer very considerably from colds, coughs, and ague.

(11.) Many never go to school at all, some only on Sundays; and those who do go occasionally are invariably dull and stupid, and if qualified, cannot pass their examination.

(12.) Morally they are generally depraved. * * * The boys and girls are most impudent towards each other in their manner and conversation.

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214. *Edward Jackson*, gangmaster, Dogsthorpe.—I am in my 82nd year. I take out about a dozen children, boys and girls, from 9 years old upwards to work for all the heads of the farmers about here. I am paid at the rate of 12*s.* a score for them. We reckon to be on the ground at 7 a.m., and leave a few minutes before 6 p.m. We are now (7 p.m.) on our way back. We have been a good four miles out to-day, that is our furthest. We go from one to four miles, perhaps three on the average. Some of my children come from another place, and they come to my house before starting. Little girls, I think, are the handiest. We begin in March, and stop for harvest, and go on till towards Christmas.

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215. *A. B.*, National schoolmaster.—It is a well-known fact that farmers *as a body* are not friendly to the cause of education, more especially in the gang district, and it is in this district that our school is situated. I know a case in which a farmer, calling himself an independent gentleman, said that he would sooner give 10*l.* to close a school, than 1*l.* to keep it open. In another case a farmer said, "We don't "want schools. We can't get servants as it is." Some say that if servants could read, they would be reading their masters' letters, &c. Their ruling motive in this is, I believe, that by keeping their labourers in ignorance they will get labour at a cheap rate, such men being more easily content. This is not my own opinion only; others who know more of these things than I do say that there can be no doubt that this is their motive.

Nottinghamshire.

216. A Return furnished to me from Nottinghamshire mentions a gang at each of three places in the neighbourhood, viz., Mansfield Woodhouse, Warsup, and Pleasley Hill, but gives no details as to that at Warsup. So far as details are given as to the others they are sufficiently represented by what is described elsewhere, and fuller particulars are given below as to one at the first-named place. The Return mentions that at that place the hours are from "6 a.m. till 6 p.m., but for the long distances assemble "sometimes as early as 5 a.m. and return as late as 7.30 p.m." and that these distances are "as far as "six miles, but then by waggon." As there is some difference as to details opportunities of comparison are afforded.

217. MANSFIELD WOODHOUSE.

Population - 2,266 Acreage - 2,860.

(1–3.) (One gang, 11 to 16 boys from 10 to 16 years of age.)

(5.) About two miles is the average distance.

(6.) Usually they assemble at 7 a.m., and arrive back at 5.30. They are employed about eight hours.

(12.) Better than not when under a leader.

(13.) As the gang system on this small scale, and where boys only are employed, works in this district it is, I think, productive of good. The main evils of the system, which I suppose arise from congregating large numbers of boys and girls under no proper control, are avoided in this place.

ALFRED BROOK.

218. The above is from answers to the printed Form of Questions by the incumbent. The following statement is also, as Mr. Worthington believes, from a trustworthy source, viz., a teacher in a neighbouring school, who remarks of it, "I believe it to be perfectly reliable and unprejudiced. I obtained "it from the father of one of the boys who was formerly employed in the gang, and who himself is an "agricultural labourer."

219. *Mansfield Woodhouse gang of agricultural labourers.*

The usual number is from 15 to 20, but during very "throng" seasons it is increased to 30 and even 40. In winter the number is diminished to eight and ten, and these are not constantly employed. During these times many of them find employment individually in pulling turnips, cleaning and chopping them up to feed the cattle.

Their ages range from 7 to 14. The sexes work in conjunction. Occasionally women are employed; one of whom is 40 years of age.

Hours of work.—These vary considerably in the different seasons and during wet weather. The proper hours are from 6 a.m to 6 p.m. There is half an hour allowed for breakfast, one hour dinner, not any in the afternoon. In consequence of heavy dews and showers it is sometimes 9 and even 10 o'clock before they can commence, and during winter months they leave work between 4 and 5 o'clock. They make half days occasionally. With the last exception their wages are always the same, 8*d.* per day.

They sometimes go a distance of five and even six miles to their work; but when such is the case, the farmer with whom they are employed always engages to bring them home in his carts or a waggon. The morality is not very good, though the "ganger," being a professedly religious man, prevents to his utmost any misbehaviour in the field. The lads congregate on their way home and in the streets, singing immoral songs and using bad language.

Treatment.—Not very good. The master carries a whip, which it appears he uses pretty freely. The parent of one of the boys described it as "nigger-driving."

Education.—Very much neglected, and consequently defective. The majority of the children are totally unable to read or write.

This labour has a very beneficial effect physically, most of the boys being strong and healthy.

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220. *Letter from the Rev. A. W. Worthington.*

Mansfield, Notts,
SIR, September 29, 1866.

[The writer refers first to a copy of a paper by him on the condition and proportion of men and women in manufacturing towns read at the late meeting of the British Association at Nottingham, in which reference was made to the adoption of a system of half time for agricultural children, and refers also to Mr. E. Chadwick's preference of a system of work and school on the same day to the system of alternate days adopted by Mr. C. Paget, and proceeds:—]

It has occurred to me, from observation of a school I visit, that a different application of the system to agricultural schools, though not so good in theory

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ould be practically more easy to introduce and retain constant use, viz, that so long as the children made e requisite number of attendances in the course of e year no exception should be taken to their irregular istribution through its course. Boys will be engaged r some weeks after sowing time in "bird tenting," gain for a continuous period in turnip hoeing, and t harvest time both boys and girls are absent for eeks, either helping the farmers or gleaning for their arents. I do not think these practices will be changed or either half-time system as above referred to; and I ee no objection to recognizing the continuous attendnce of the children during the intervals when their abour is not wanted on the farms, provided they nake an equivalent number of attendances, and pass he inspector's examination.

Yours, &c.

J. E. White, Esq. A. W. Worthington.

221. *Another letter from the same.*

Mansfield, Notts,

Dear Sir, October 16, 1866.

[The letter refers "as an additional reason for introducing the half-time system into agricultural labour," to the experience of "a large employer of labour, Mr. William Hollins, who engages many children under the Factory Act," who has kindly favoured me (J.E.W.) with his views in his own words. *See* letter No. 222. The letter then refers to Pleaseley Hill.]

The schoolmaster there (*i.e.* at Pleaseley Hill), an intelligent man, says that he found the gang in existence when he went to live there about seven years ago, but does not know how much before that time the system came into use. He thought it had clearly arisen from the convenience to the farmers of employing labour at a moderate price at such times as they wanted it, and with little difficulty in engaging it from the gangmaster, who pays the children.

I have known this (Pleaseley Hill) school intimately for eight years, and it was mainly on my experience of its working that I founded the plan I suggested in my last letter of a half-time agricultural system, which should recognize this occasional employment of the children for a few weeks, and their similar leisure, rather than enforce their being employed at times when there is no work for them, and required to be at school when there is. Such a system (of half-day or alternate employment) would inconvenience the farmers when pressed for extra hands, and be likely to rouse the opposition of parents, as it would deprive their children of half the wages already available only during *parts* of the year. Were the employment *continuous* these difficulties would not exist, and the system of the Factory Act would be preferable, but I am afraid that the system I have suggested is the only one likely to be enforced without difficulty and opposition, or with success.

I have consulted as to the difficulties you mention with the master of the school at Pleaseley Hill, who, having been trained in a Lancashire school under the Factory Act, is acquainted with the half-day system. He tells me he thinks that would be the *best* theoretically, but that it could hardly be applied to his agricultural children, not only for the reason Mr. Paget alleges, of the difficulty arising from the children having to "clean" themselves and change their dress, &c., but also because the children often work at too great a distance from the school to enable them to divide the day between work and schooling. *Next* to that, he thinks he should get the children on better by the plan I proposed than on alternate days, as he then should have them for continuous instruction during periods of weeks at a time, and he thinks get them on better than if he had them alternate days.

The children employed in the fields are, he tells me, mostly *under* 13, as the farmers want either men or children, not youths.

It seems to me that the existing machinery would suffice under the plan I proposed for effecting the end desired. The children come to school *readily* when there is no work for them, and their present attendances would qualify them for half-time scholars, but I am afraid, in such circumstances as exist here, it would be found a great hardship, and require possibly coercion, to allow them to work only alternate days during those various periods when they can get employment in the field.

I remain, &c.

To J. E. White, Esq. A. W. Worthington.

222. *Letter from Mr. W. Hollins, Manufacturer.*

Pleaseley Vale,

Sir, November 8, 1866.

In answer to your note, which I had the pleasure of receiving on the 4th, I can fully confirm the disadvantages we, as mill owners, labour under from the operation of the Factory Act on half-time children.

Though our wages are *nominally* as high as the agricultural for boys of the same age, the legal limit to 30 hours reduces the actual earnings to *one-half* for this class of labour in mills, and the cost of the school being 3*d.* each, this is another tax on the mill boy as compared with the farm boy.

The consequence is that *rural* mills are almost denied the use of this part of the population of the district, and it is my opinion that if the health and comfort of people working in factories is to be a consideration with our legislature country mills should have their especial regard. The "gang" system on farms has so simplified and economized the work of children on the land that the demand for their labour has increased of late materially, very much to the inconvenience of the mills. We have just advanced the wages of children under 13 twenty-five per cent. in order to attract them to our employment, but we still fear the restrictions as to the time worked and compulsory school will be obstacles sufficient to their parents, and prevent any application for mill work.

The entire exemption of the land and other investments from these labour restrictions has a most unfavourable (effect ?) upon property like ours, and also upon the progress of education among the working classes, and I hope it may be in your power as a Commission to suggest some means by which the half-time and school system may be adapted to the farming occupations.

I really cannot speak much about the moral and bodily results of the "gang" mode of employment, but as it seems quite practicable to organize *troops* of children for labour, I think it might be equally easy to attach educational conditions to the engagement.

Begging you will excuse this hasty and imperfect statement.

I am, &c.

J. Edward White, Esq., Wm. Hollins.
Assistant Commissioner.

Staffordshire.

223. A Return was furnished to me by Mr. J. Bright, steward to the late Lord Hatherton, relating to a gang of boys which he had employed "at Teddesley in Staffordshire belonging to the late Lord Hatherton on a farm of about 1,500 acres of very poor land." The account is much the same as that given in the subjoined letter, which the writer has kindly allowed me to use. Mr Bright adds:—"This is the only system that boys so young can be employed in a profitable manner, as they require an overlooker and it would not answer to employ one for a very small number." He refers also to the same experiment as tried at Woburn on a large farm belonging to the Duke of Bedford, and "found to answer very well." He gives the hours of work at Teddesley as from 8 a.m. till 6 p.m., "two hours allowed in the morning for school."

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224. *Letter from Mr. J. Bright.*

Bath Row House, Birmingham,
May 24, 1865.

Rev. Sir,

* * * * I have travelled much over every part of this country during the last 50 years, but I was not aware that the practice of employing children was ever resorted to in the way you describe, particularly boys and girls together, which I think very objectionable. I have always regretted to see women employed in field work, except a few days in harvest, as I think they would be much more profitably employed in the management of their houses, families, and gardens; and with the latter every labourer should be liberally supplied.

When I was at Teddesley I had a gang of from 20 to 30 boys employed in lieu of women. They were never set to work until they were 10 years of age, and not then unless they could read and write; and for the last 10 years, they were instructed by a schoolmaster about two hours each morning before they commenced work; and at the rate they were paid, which was 6*d.* per day, I always thought their labour very cheap. They continued often three or four years, but they were allowed to leave whenever they could get a better situation and more wages.

The greatest difficulty I met with was in the selection of the man to put over them, as I found some treated them severely and others had but little control over them; but this difficulty was got over after some time and several changes.

I cannot think there can be any more difficulty in dealing with this matter than there was with the "Factory Bill," as the opponents would not be so numerous, and I think it is a matter of quite as much (if not more) importance; and I should expect the clauses in that Bill would, to some extent, apply to this.

I remain, &c.

The Rev. T. Hutton. J. Bright.

General.

225. At a late meeting of a Norfolk agricultural association the Earl of Leicester, in a speech made by him as Lord Lieutenant of the county of Norfolk, in which he is a large landowner, addressed himself mainly to a question which indirectly has an important bearing on the present subject, and I have his lordship's kind permission to avail myself of the remarks then made by him upon it, and given below from a correct report of the speech. The weight of his name is, I believe, such as to give additional importance to his views, were any needed, but his statements speak for themselves.

226. *Speech by the Earl of Leicester.*

The Earl of Leicester, in returning thanks, said, * * * * It is in my position of a landlord and a farmer that I will address to you a few words this evening connected with our profession. * * * * I will, however, say a few words on a subject with which I am well acquainted, to which my attention has been continually drawn for the last 20 years, and which is of vast importance to us all—the homes of our labourers. Some 30 years ago there was so great a surplus of labour in this county that it was evidently to the interest of the owner and occupier of land to endeavour to diminish the population, and means were extensively taken to promote the emigration of our labourers to distant colonies. Since the Act, called the New Poor Law, came into operation, the supply has been about equal to the demand, but during the last year, in spite of every advantage from the application of machinery, there has been in many districts of this county a great scarcity of labour. I will endeavour to point out what I consider to be the causes of this evil and its remedy, and in doing so I will, if you will allow me, state the facts as they exist on my own estate, which I believe is a fair example of the majority of landed estates in this country. Previous to the passing of the important measure of 1865, by which the area of rating was extended, it had occurred to my mind, as well as to many of my tenants, that it would be desirable to provide houses for the labourers in the parishes in which they were employed, though by so doing the probable certainty of increased rates was incurred; after the passing of that Act, I do not think the question admits of a doubt. I am the owner of 521 cottages, supplying probably about 450 able-bodied labourers. I calculate that 950 labourers are required to cultivate my property; thus leaving 500 to be obtained who are not resident upon the estate. I will divide the labourers employed into what I will call the home and foreign supply. The home supply can always be depended upon; they have constant employment, and although wages are nominally 10*s.* per week, yet, owing to the system of piece work (a system as beneficial to the labourer as it is profitable to the employer), I think I may state their earnings to be 12*s.*, with a considerable increase in hay and corn harvest. They live in good houses, and I may say that, with hardly an exception, owing to the untiring energies of my late agent, Mr. Keary, and my present agent, Mr. Shellabear, they live in decency and comfort; they almost all have good gardens, and for these and their houses, which are let by the week, they pay an average rent of 2*l.* 17*s.* 4*d.* per annum. These men will remain on the estate; but of what does the foreign supply consist? Those 500 men who are required to properly cultivate the land? They have no certainty of constant employment. Under the most favourable circumstances, if living within the parish, they occupy houses that have been built upon the speculation of a remunerative return upon the outlay, and to afford this they have to pay 4*l.* or 5*l.* a year for a meagre dwelling, in which they cannot live decently or comfortably, and they rarely have a garden. But in very many cases they have also to walk three or four miles to and from their work in all weathers; they have not the same attention in sickness or ill-health as those resident on the estate, and there is not, and cannot be, any tie to bind them to it. I say it is much to the credit of those men that they are seeking happier homes and better masters; and in these days of increasing intelligence and consequently more rapid and direct communication with the rest of England, I believe that the scarcity of labour we are now experiencing is merely the commencement of what will be seriously felt in our agricultural districts, unless an immediate remedy is applied; and the only remedy is to build as speedily as possible sufficient cottages for the larger proportion, if not for all those required to cultivate the land, either upon the farm or in the parish where they are employed. I have no hesitation in saying that where there is a deficiency of cottages the supplying that deficiency is one of the best investments a landlord can make. Admitting that the rent received from the labourer would not pay a remunerative interest upon the outlay, I much question whether the existing rents of land can be maintained without further cottage accommodation, but I am satisfied that rents may be considerably increased when there is a sufficiency of homes for the labourer. During an existing lease there is not one of my tenants who is not willing to insure me 5*l.* per cent. interest upon any sum I may expend in providing homes for his labourers where they are required, and the time is not far distant when the first requirements of a farm will be, not ample farmsteads, but sufficient cottages. Now a word as to the plans and the details of letting these cottages. It may be thought that this is solely a landlord's question, but it is not so. All that we may attempt to do upon such occasions as the present to improve the physical and moral condition of the labourer is of little avail, unless he has a home suitable to the wants of himself and his family, and I have found my tenants not only eager to promote these associations, but ever ready to co-operate with me in educating, clothing, and attending to the wants of those they employ. I believe that my cottages are now constructed at the least possible cost, with the greatest amount of convenience and every accommodation required by a labourer and his family, and I much doubt whether the cottages I have built since 1863 at * * * * can in any way be surpassed. They are substantially built, of the best material, and I have not attempted in any way to make them ornamental; the doing so would not only materially increase the original cost, but add greatly to the expense of keeping them in repair. The cost has been from 100*l.* to 115*l.* per cottage, not including carriage, which is done by my tenants, and may be estimated at 12*l.* per cottage. These cottages, as well as all others on my estate, are for the use of the labourers employed upon those farms to which they are contiguous, and I consider it right that the tenant should have the nomination of the occupant, but that in every case the cottagers should hold direct under their landlord, pay their rents to him, and not be removed except by his consent. It has been said that an Englishman's house is his castle, but this must not be applied without reservation to the cottage of the labourer. I find that, whether from an eagerness to obtain assistance towards the payment of their rent, or a dislike to turn out their children when married, overcrowding will gradually and certainly ensue, with the necessary accompaniment of want of decency and comfort, unless strict rules are laid down, and they are strictly enforced. As a rule the children when married must seek another home, and no lodger should be permitted without special permission. I have now stated what I believe to be the chief cause of the evil which is beginning to affect us, and appears likely to increase. It has long been a source of misery to the labourer, and I have a firm conviction that the comfort of a convenient residence, the wages we can afford to give, home associations, and the supervision that would not be obtained in a strange land will retain for us that greatest source of our wealth, the muscle and sinew of the agricultural labourer.

> [His lordship's remarks on this subject were borne out by the gentleman who returned thanks for "their president, the Marquis "of Cholmondeley" and who "could not "but reiterate all that he (the Lord "Lieutenant) had said."]

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227. *Letter from Rev. W. T. Becket.*

Ingoldsthorpe Rectory,
near Lynn, Norfolk,
October 30, 1866.

MY DEAR SIR,

* * * * As a proof of diminution of adult labour, out of 62 married men only 30 are employed in field work; 7 are from age incapable of work, 25 are servants, in trade or other occupations, and of these a few years back nine were agricultural labourers, but have now turned to other employments; several grown up men have left the parish; 30 boys and lads are, however, employed, of whom 20 are under 13 years of age; whilst 14 lads have when they reached the age of 16 left the parish, their place being supplied by younger boys. I am pleased to say that now, in consequence partly, I believe, of my opposition only nine women out of 60 are employed in outdoor work, and of these two are widows. Several of the girls were so employed, but now there are only two or three.

I must mention to you, that when remonstrating the other day with one of my parishioners, the mother of a large family, on allowing her children to go so very young to field labour, and mentioning to her that I hoped a law would be passed to prevent it, she said warmly, "I sincerely hope it may be so, for though "we know we are wrong, and injuring our children "bodily and religiously, the temptation is too strong "for us; we cannot refuse the money. I wish it was "put out of our power to send them so early to "work."

I remain, &c.
To J. E. White, Esq. W. T. BECKETT.

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228. By the kindness of the Lord Bishop of Norwich I was present at the annual meeting of which an accurate account is given below, taken from the usual annual report, with which I have also been favoured. The meeting, held under the presidency of his lordship at his palace, was largely attended by his diocesan school inspectors, who are upwards of 40 in number, and some of whom are rural deans, the archdeacons also being present.

229. *Report of meeting of Diocesan School Inspectors, held November* 17, 1865.

At the evening meeting there were also present Her Majesty's Inspector for the district, the Rev. F. Meyrick, and J. E. White, Esq., Assistant Commissioner, Children's Employment Commission.

The subject for discussion was—How may a child's need of instruction and training in the school be adapted to the reasonable demand for its labour towards the support of the family?

The question was most earnestly discussed with reference to the special circumstances of the diocese. The delicacy of the question, as one tending to interference between the employer and the employed, between the child and the parent, and the seeming reasonableness of the claim which the parent might make upon the child to contribute as soon as it was able towards the support of the family, were acknowledged and borne in mind throughout the discussion; whilst a strong feeling was expressed that in any antagonism between the claims of labour and the claims for education it would be the duty of the clergy and friends of education to make a firm stand on behalf of the education of the poor, so as to ensure to the children of agricultural labourers the rudiments of religious and moral training, and instruction in the elements of knowledge.

The evils of "the gang system," the most prominent aspect of child labour in some parts of the diocese, were detailed and discussed. It appeared that great injury is resulting therefrom (in its present unregulated state) to the moral and religious condition, physical welfare, and educational interests of the children. The difficulties of legislation on the subject were fully admitted, but it was generally agreed that it should and might be enacted that no person should act as a gangmaster without a license from the magistrates of the district, revocable for misconduct; and that although "the half-time Acts" now applied to manufacturers were not entirely applicable to farming labour, yet some modification of them, so as to secure the attendance at school of children employed on the farm at "bye times" or "off times," would become necessary, and might be advantageous if that attendance were distributed with some degree of regularity throughout the year. It was felt that whilst evening schools (to which it was suggested that Miss Burdett Coutts' scheme might with advantage be adapted,) might do somewhat for the education of those who were prevented from obtaining education at the day school by their too early removal from it through the demand for their labour, yet the training and instruction which they need cannot be received by them in the evening school when tired and worn out by their day's work.

But whatever provision might be made for the instruction of the children, it was considered to be of the utmost importance that the gangs should be under proper supervision, and that adults, youths, and children, and in the cases of the first two the sexes also, should be separated, and not work in the same gang.

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The meeting was informed that to almost every objection to legislative interference which had been said to be insuperable in the case of agricultural work there had been in manufactures some analogous objections, also considered by employer and employed as insuperable, which had however been satisfactorily met and overcome. But whilst some of those present thought that all that could be done was thus *to regulate* the employment of children, there were others who were in favour of calling upon Parliament so to restrict it as *to prevent* their employment in gangs under a certain age.

The desire of the labourer for the education of his children, and the readiness of the employers of labour to fall in with any proposition which was shown to them to be necessary and conducive to the welfare of their labourers were regarded as elements which would facilitate the solution of what was acknowledged to be a very great and pressing difficulty.

230. The above Report also states that out of the 41,822 scholars on the books from a population of 402, 725, "the average attendance throughout the year was 25,522. In the night schools the number of "scholars was returned at 5,119. The returns of Sunday schools are incomplete" (*q. v.* in subjoined Table). The report also contains the following Table, with detailed numbers for each archdeaconry, which are here omitted.

SOME RESULTS OF INSPECTION, 1865.

—	Number of Parishes.	Population.	No. of Day Schools.	Population.	No. of Children on the Books.	Per-centage of Children on the Books, compared with the Population from which Returns have been received.	Average Age of 1st Class.	No. of Parishes without a Day School.	No. of Sunday Scholars on Books.	No. of Parishes reported as without a Sunday School.
The Diocese	1010	609,774	605	402,725	41,822	10·38	10·31	120	22,860	62

231. *Letter from Mr. C. Paget on Half-time.*

Ruddington Grange, Nottingham,
4th Oct. 1866.

DEAR SIR,

YOU suggest that my remarks on the half-time system of education applied to farm boys should be made under the following heads:—

a. What were the reasons which led you to adopt the system.

b. The details, which on trial you found most convenient for carrying out the plan.

c. The results as regards the boys, both as to their work at the time, and as to their subsequent condition.

On the two first heads I beg to refer you to a paper which I read at the Social Science meeting of 1858, every word of which I now confirm after eight years additional experience of the system.

As to their work at the time, my bailiff is quite satisfied that the work of the farm is carried on better than it would be by boys constantly at work. Educated boys carry out orders with greater intelligence, and they are more alert because less fatigued than those who are subject to daily toil.

As to the effect of the system on the future career of the boys, I can speak with a confidence greatly increased. It would be difficult to find an equal number of boys educated in any other way who have conducted themselves more creditably in their advance to manhood. Many parents seeing the successful career of the earlier pupils have readily sacrificed one half of the children's wages to secure for them the same advantages.

Those boys who wish to continue in farm service easily find masters, for they are, as a rule, better servants than those who have not had the advantage of combined education; the greater number, however, find more lucrative employment, because their manners and intelligence are far above the average; I believe that nine-tenths of them would be entitled to the parliamentary franchise upon any educational test which I have seen proposed.

It may be that my experiment is carried out under exceptionally favourable circumstances, that children whose parents are willing to make a present sacrifice to secure the future welfare of their offspring must be brought up under superior home influences, and that if all were equally well educated the chances of advancement in life now enjoyed by my pupils would be materially diminished; however this may be, as there is no reason to believe that my boys possess more than average ability, I think I have proved beyond controversy that a very fair amount of learning may be imparted between the ages of 9 and 13 without impairing a farm boy's preparation for the active duties of his calling.

I acknowledge the difficulty of applying compulsorily the principle of the Factory Act to agriculture, because inspection would be impossible; but the clergy and the schoolmaster would, I trust, feel themselves the guardians of the children, and might, with the assistance of the police, secure a general obedience to the law.

Farming employment differs from that in factories, inasmuch as it depends much more on weather and seasons, and I find it compatible with progress at school to retain the boys on the farm occasionally when there is a great press of work. If, therefore, any legislation is proposed respecting farm children it should be marked by considerable elasticity, at the same time securing that the intervals between school attendance should be short. I have a strong opinion that such legislation is desirable, and every application of the system to other labour makes the regulation of farm labour more imperative.

Factory education in rural districts is very imperfect, because, for the sake of their earnings, children are sent to the farmer who employs and pays for their whole time, until the latest period which is consistent with their admission into the factory, and the education which ought to have been carried on at 9 years of age does not commence before 11 or 12.

Again, a large proportion of the criminal population in towns consists not so much of their natives as of the outcasts from the country districts and their offspring. Many years ago I traced the history of the criminals who were brought before me in Nottingham, and I found that much the larger portion of English consisted of those who had been driven from their native village for larceny or offences against the game laws.

I recommend, without the slightest hesitation, immediate legislation for boys employed in coal mines; working in darkness and solitude, they require beyond any other class the physical and moral advantages of the system.

With the aid of Sir G. C. Lewis and Mr. Adderley I succeeded some years ago in passing through the House of Commons a clause providing that under 13 years of age they should not work constantly in the mine, but should attend at school for two days in the week. Unfortunately the House of Lords substituted for this clause a provision for their attendance at a night school after the hours of labour; the cruelty and insufficiency of this provision are now manifest.

I send by book post some copies of the pamphlet to which I referred at the beginning of this letter, and shall gladly give the Commissioners any information or assistance in my power.

To J. E. White, Esq.

232. *The Paper above referred to, being an account of the "Results of an Experiment on the Half-time System of "Education in the Rural Districts," by C. Paget, Esq., M.P.*, 1859.

Having seen the advantage of the system of Factory Education, it occurred to me that the same principle might be introduced into rural districts.

In November, 1854, I determined to employ eight boys on my farm, to do the work hitherto performed by four, each boy spending half his day at work, and half at school —relieving each other, so that I should always have four on the farm and four at school. I found an inconvenience in this arrangement; when the boys' clothes were wet and dirty, from their morning's work, they were unfit for school. I therefore changed my method, and the boys now work on alternate days.

After four years' experience, I speak confidently of the satisfactory working of this system. As an employer of labour, I have every reason to be satisfied with it. The boys having an alternate day of rest, work with more pleasure and spirit; and I have no difficulty in finding as many willing to accept employment on these conditions as I want. The parent, who might feel the entire loss of his son's wages to be too great a sacrifice, is willing to forego one-half the amount to secure to him the advantages of an education, which does not interfere with the acquisition of the knowledge which is essential to his power of maintaining himself at an early age.

The great advantage, however, is to the children themselves. They are never weary, either of school or of work. Their progress is found to be very nearly equal to that of those whose sole business is attending school. At 14 years they have received not only a very fair amount of the rudiments of school-learning, but they have also acquired a knowledge of the business of life, and are ready to enter into service with all that skill arising from habits of labour, combined with hardihood from exposure in out-of-doors work, which the farmer who hires them has a right to expect. They are much better servants than the mere schoolboy could be. Their school life being compared not with a holiday, but with a day of labour, they look upon it as a rest; and their associations with books are not irksome, but agreeable; so that, as a rule, they will retain what they have acquired.

The schoolmaster, also, feels the advantage of this system. The boys attend more regularly than the average of children—and, remaining to a later age, their attainments are higher, and they give a higher tone to the school. Mr. Spencer, the master of our Free School, declares that any master who has once experienced the benefits of the system will be very unwilling to forego them.

In the first week of October 1858 I examined three of the boys now working on my farm, who have been upon this system a considerable time, and who are about to leave school; two being 13, and one just 14 years of age. (Mr. Paget here gives details, showing that the boys "read "intelligently and well, wrote from dictation in a clear hand, "and with few mistakes," and were "quite familiar with "the first four rules of arithmetic, and reduction, and "compound multiplication."—J. E. W.)

The best evidence I can give of the value entertained by the labouring classes for this system, is the statement that they voluntarily adopt it in their own arrangements.

In addition to 16, who are working as pairs in agricultural labour, there are several pairs employed in the winding and seaming, belonging to the stocking manufactory, and several girls, who assist the mother in her domestic duties alternately; and I have good reasons to believe that in both these cases the system works very satisfactorily.

If every parish were blessed with a schoolmaster as benevolent, zealous, and intelligent, as the master of our Free School, I do not believe there would be any difficulty in the wide extension of this system.

Where, in close parishes, the possessors of estates compel the labourers to live in adjoining villages, in order that they may keep down their poor rates, no doubt there may be difficulty in providing pairs in sufficient number for the convenience of the farmers; but this is only one of the many evils arising from the existing law of rating, which are so serious in their effect upon the moral and sanitary condition of the people, that they must ere long attract the attention of the legislature.

This alternate system of labour and rest appears to be indicated by our nature, in which the activity of the body is a good preparation for the activity of the mind, and every hard-working professional man has found that the best rest for his over-tasked mind is in bodily exertion.

Much more than satisfied with the result of my experiment, I would earnestly request that any of the friends of education who may have it in their power will repeat it.

The principle is one which admits of a very wide application. Already has a manufacturer in Nottingham adopted it with satisfactory results to the 40 boys in his employ; and I believe that our middle classes might give their sons up to the age of 20, an alternation of a day of college and gymnastic exercises, with a day in the counting house; and thus, with God's blessing, confer upon them that inestimable boon, a sound mind embodied in a healthy frame.

233. Mr. Paget prefixes to the above paper, as the reason which led him to print it, the following statement:—"Since this paper was read * * many inquiries have been addressed to me on the subject. "There is a general desire for proof that in rural districts the education of the mind and body can "be carried on advantageously together." Mr. Paget mentioned to me that a reason, which, in addition to that stated in the beginning of his paper, specially determined him to adopt the half-time system, was his finding that young men, especially some who had emigrated, were often kept back from rising to higher situations by their want of education, and by their consequent inability to read, write, and keep accounts. He mentioned also that he found it needful to institute periodical examinations as a means of keeping up and increasing the efficiency of the boys' education. Mr. Spencer also spoke strongly on the satisfactory working of the system.

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234. The following petition, not yet presented, was lately signed by 30 of the clergy of a district in which the gang system is prevalent. The Rev. H. Macdougall, of Thorney, who kindly supplied me with a copy of the petition, informs me that, "They (the petitioners) are from the incumbents and "curates in and around Peterborough, Wisbeach, Whittlesey, and Crowland. Some refused to sign "simply because they desire to see the system, if possible, abolished altogether. The majority, "however, I think are of opinion that it is a necessary evil, but should come under legislative "control."

235. *The Petition above referred to.*

To the HONOURABLE the COMMONS, &c.

The Humble Petition, &c.

Humbly sheweth,

That a system called the gang system, for the employment of young people in field labour has of late years been extensively adopted in or in the neighbourhood of many of the parishes of which your Petitioners have spiritual charge.

That your Petitioners regard the said system with anxiety, as tending to corrupt the morals of the young people so employed.

Your Petitioners therefore humbly pray your Honourable House that the aforesaid subject may receive the consideration of your Honourable House, with a view to the future legislative control of the system, and your Petitioners humbly beg to represent that in their opinion—

1st. No children should be employed under 10 years of age.

2nd. No children under 12 years of age should be allowed to travel on foot beyond the distance of three miles to or from their work.

3rd. No children should be employed more than eight hours, including an interval of an hour for rest and refreshment in the middle of the day.

4th. No gangs be allowed to be composed of different sexes.

5th. No person be allowed to superintend a gang, or act as gangmaster, without a special licence for that

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purpose from one or more magistrates acting in and for the district wherein any such young persons may be so employed.

236. *Extracts from the Reports of the Rev. F. Meyrick, H. M. Inspector of* Schools.*

(Years 1863 and 1865.)

(*Report. Year* 1863.) "The age of the children who attend the day schools continues to decline. The average age of children in the first class in country schools is now 11, whereas a few years ago it was 12. This is partly owing to the natural pressure on the poor which arises from the requirements of labour, partly to the existence of what is called the gang system, a system which, unhappily, prevails too extensively in Norfolk. According to this system children of both sexes are drafted into gangs by a man who contracts to do so much agricultural work in a given time, and the result is most deleterious, not only to the efficiency of schools, but also to the modesty and the moral character of the young people who are thrown together without any sufficient safeguards and protections. The attention of some influential landlords has been directed to this point, but no adequate remedy for the evils involved in the system has been discovered."

(*Report. Year* 1865.) "An Assistant Commissioner has, I am glad to say, been inquiring into the gang system, of which I complained two years ago, as it is carried out in Norfolk. Where this system prevails it is impossible that schools can be efficient, or that children can be adequately taught; and it is next to impossible that great physical and moral injury shall not accrue both to boys and girls. Seeds of disease are implanted by a too early exposure to weather, and by excessive labour performed under the eye of a taskmaster. Seeds of moral evil are sown or ripened by large assemblies of boys and girls, young men and young women, with no restraining influence except that of the gangmaster, if that can be called a restraint at all. Attempts have been made to lessen this serious evil by some of the leading landowners in the district. * * * But I think that our poor, and the children of our poor, have a claim to some further protection. While child labour is allowable by law, parents in the labouring classes are obliged to send their children into the field instead of to the school, because their employer requires it of them, while they are also tempted to do so by the sixpences and shillings brought to the household stock by the child's earnings. But such a course of proceeding is contrary both to the duty and to the interest of the parent; to his duty, because he ought to elect (hard choice as it is) to suffer himself rather than interfere with the future good of his child; to his interest, because the employment of child labour necessarily depreciates the value of his own, and brings down his wages, so that in the end he does not even make a pecuniary profit out of the evil inflicted on his child. But it is not to be expected that he will see this for himself. I hope that no attempts to regulate the gang system will be made. I should gladly hail an enactment which, by declaring child labour in general illegal, should annihilate the agricultural gangs as they exist in Norfolk.

237. *Letter from Mr. Francis C. Beets.*

To the Right Honourable Earl of Shaftesbury.

Right Hon. Sir,

I most humbly pray that your Lordship will pardon the liberty I have taken (though but an humble individual) in writing to your Lordship.

Seeing an observation your Lordship made in your Honourable House upon the agricultural ganging system, I beg leave to lay before your Lordship a letter (that subjoined.—J. E. W.) I published in 1848 in the two Norfolk and Norwich papers, which from ocular demonstration have witnessed and experienced its demoralizing effect upon the rising generation for the last 30 years.

I remain, &c.
Francis C. Beets,
43 years a village schoolmaster at
Grimston, near King's Lynn, Norfolk.
May 17th, 1865.

238. *Letter enclosed with the above.*

To the Editor of the *Norfolk Chronicle.*

Sir,

Much having been done by Government, by the National Society, and by the ministers of the Established Church, for educating the poor in all towns and villages of this kingdom afforded a most delightful prospect to every serious mind of a national reformation of manners among the lowest orders of the people, the poor themselves eagerly embracing the opportunity of sending their children (till they were of an age able to assist in supporting themselves) that they might in early years receive such instructions as would be the means of making them good subjects and good Christians.

Within the last 30 years the light and knowledge of Scriptural instruction has spread through every village of this land; but there is a system which has begun the last six years (and which if continued will be the means of causing the rising generations in country villages to grow up in extreme ignorance, increasing that vice and immorality which disgraced former ages), that of forming young children into gangs to do that work in the fields which ought to be done by proper labourers (viz.), one man collects a number of children, males and females, of tender age, from 6 years and upwards, thus forming a gang which takes different kinds of work of the farmer. In the spring the first employment is gathering of quicks from the fallow ground; this lasts till turnip sowing and haytime; this and singling turnips keeps them employed till harvest, at which time the poor children are released from bondage for a few weeks to pick up the grain. After Michaelmas they then return to their slavery, commencing with pulling turnips, and it is shocking to see such small children of tender age in the months of November, December, January, and February (if the weather is open) in the fields perishing with cold instead of being at their village schools. Beside the evil accruing from males and females congregating together, early imbibing principles of vice, immorality, and all kinds of profligacy, having no check put upon that wickedness so early inured by them, their mode of behaviour becomes disrespectful in the extreme.

There is another evil attending these gangs of children. I have seen them on wet days going with the gangman to the beerhouse, frequently imitating the drunkard in the street, which is the first step to every kind of wickedness.

Likewise, the employing of young children in gangs throws a number of young men out of employment, which if it had not been for the railroads in this part of the country, numbers would not have found the means of subsistence, for the want of which, practice poaching and thieving. Such a system must inevitably be ruinous to society.

Is it not to be expected that in the course of a few years (if this system is continued) country villages will be filled with gross darkness and ignorance in the extreme, regardless of all authority whatsoever? Young females, instead of being employed at school learning those things that would be useful in after life, are by this system rendered useless and worthless members of society, and when arrived at the age of maturity are unfit to become mothers of families, being ignorant of everything necessary for their proper management.

I have found by experience that children who have at the age of 8 years been employed in these gangs,

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* The Church of England Schools in Norfolk and part of Suffolk.—J. E. W.

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after leaving them become so confirmed in wicked practices that they disregarded every instruction you might give them or punishment inflicted upon them; besides, those young children so employed a very few of them ever attend the Sunday schools, which on account of their early rising during the week very seldom rise till a late hour on the Sabbath, so that they entirely lose every kind of instruction.

If the rising generations are to be entirely deprived of instruction by such early bondage in youth, to what a state of ignorance must that class of persons arrive; as the Judge at the last Norwich Assizes remarked during the trials, that 'in this county moral feeling 'appeared to be in a very degraded state.' Such must inevitably be the result of this system if children of such tender years are sent into the fields month after month before any foundation has been laid by instilling some good principles into their minds, in teaching them the fear and love of God, and a reverence for the duties of religion, which in after life would be the means of restraining them from committing those crimes which such a system of early bondage and the practice of vice and immorality must be the means of increasing.

FRAS. C. BEETS.

Grimston, Aug. 21, 1848.

239. A copy of a letter signed "F. C. B.," and written in almost the same words as the above, except so far as required by the difference of address and date, and introduced by reference to a late charge against some girls in a gang, appeared in a Lynn newspaper in November 1865, and was forwarded to me by a clergyman in the neighbourhood with the remark that he did not know who the writer was, but that he "certainly pointed out shortly some of the great evils" of the gang system.

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240. The accounts contained in the following statements have been received as bearing on the alleged moral influences of gang work, and I do not feel justified in withholding them.

241. *Case at the Downham Market Sessions, August* 6, 1866.

ASSAULTING A FEMALE CHILD, NAMED A.B., OF ——:—

A. B., 13 years of age. * * * * * . I know C—— (the defendant) he is the gangmaster. I remember last Monday week. * * * Mr. C—— pulled me down and pulled up my clothes, pulled up my clothes only to my waist. I think there were a dozen in the gang, it was in the sight of the gang, we were sitting down to our dinners. * * * * The other boys and girls in the gang were round me. I called out, the others laughed. He said, 'Open your legs more.' He had a stick, and I had not run away with it. I told my mother, not directly I got home (at night). I told her half an hour after. My mother spoke to me first. C—— hurt my hand when I tried to get up. He was on me and I could not get up, he was laying on me flat, I was on my back on the ground. I don't know how long he was on me. He did not say anything to any of the others, the others saw it. C—— has threatened to flog me, if we told any tales; this was before the assault.

[On cross examination by a solicitor the girl denied anything passing about "shaving." (See below.) A boy ——— in the gang, aged 12, who was 100 yards off at the time, deposed that he only saw defendant "shave her and put his hand up her petticoats."—J. E. W.]

——, a boy aged 10, brother of the girl. * * * I saw C—— pulling the girls about and showing their backsides. He did it to my sister, and —— (two other girls named. The boy then confirms the facts and the words used by the defendant, as stated by the girl.—J. E. W.) I was four or five yards off. The boys and girls were all dining together. My sisters clothes were up not five minutes.

——, 13 years (one of the two girls named by last witness.—J. E. W.) I work with C——'s gang. I was there one day last week. —— (the girl assaulted) took his stick. He got on her and rubbed her face. He did not pull up her clothes.

[Sentenced to two calendar months' hard labour.]

242. The document from which the above is taken appears to be a formal copy of the depositions, and was forwarded to me by a member of Parliament, with the remark "I am afraid they (cases) would come "oftener before the magistrates if the children dared to speak." A gentleman who heard the case, and with whom I am acquainted, also forwarded his notes of it, from which it appears that the girl assaulted did not tell her mother till the latter asked about it, "from something which she had heard from a "neighbour," and the girl is represented as stating "The same sort of thing has taken place with "two other girls; with me once before." In this account some details are given more fully, and are by no means more favourable to the defendant. The writer of this last account speaks of "great pains "taken to hush the matter up," and remarks, "It seems that on another occasion he threw himself upon "her and rubbed his chin on her face. There was some confusion about the transaction of shaving and "that for which the information was laid as to date. It will be seen that this evidence is somewhat "contradictory, though conclusive, however, of the practices alleged being common." The farmer employing the gangmaster, an old man of 72, and who had employed him "30 years, 25 wholly on his "farm, had always found him a straightforward and upright man, and believed that he would act as a "father to the children." From this, and from the Return made from the parish, it appears that the above defendant is what is called a "private" gangmaster. The gang consisted of 14 or 15 young girls and boys, one of the latter 8 years old.

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243. *Case at the Borough of Wisbech Petty Sessions, November* 7, 1865.

[The depositions in this case, as furnished to me, are entitled "Aggravated assault by ganger," and add notice of conviction and sentence. (See below, No. 246.) Their details are such that only their substance can be given, which is as follows:—

A girl aged 15 had been working at carrot digging in a field under the man, and was kept there by him late in the afternoon after the other workers, two men and a woman, had left. He then began an indecent assault on her, was interrupted by the sight of persons passing on the road, shortly afterwards pulled her to a spot further off, and there carried on the assault, with an infamous grossness of act and language. The girl's account was confirmed by two witnesses in a way which leaves little doubt as to the character of the assault. The girl, when recalled, deposed, "Defendant told me not to tell anybody. "On the Monday following my mother had heard of "it, and threatened to whip me, if I did not tell the "truth, and then I told her."—J. E. W.]

244. Some months afterwards, not being then aware of this case, I met a girl having the same two Christian names and surname, and in other respects corresponding with the description of the above girl, returning into Wisbech with several other apparent gang workers. She told me, however, that on that day only two had been working with her, though sometimes there were 20, mostly girls, and "a man walking

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"behind them." This perhaps will account for some vagueness in the use of the word "ganger" (see the following letter). In the heading to the previous convictions against this man given below he is described as "gardener." I had requested information as to whether the girls assaulted were in the employment of the man. The girl whom I saw as above had a child-like manner and appearance, and not such as might be attributed to the girl concerned in the above case.

245. *Letter referring to the above case.*

Town Clerk's Office, Wisbech,
Sir, November 30, 1866.

I send herewith minutes of convictions of D. E. (the man convicted as above.—J. E. W.), which may be relied upon as authentic.

D. E. has never been a ganger in the strict sense of the term. In the case of the assault upon the girl —— (in the above case.—J. E. W.) he was considered to be in a position somewhat analogous to that of a ganger, he having been intrusted by the master, by whom all the persons engaged in the field (——, the girl, included) were employed, to overlook and direct the rest; and it was owing in a great degree to his possessing this limited authority over the girl that the magistrates felt justified in convicting him, since there were circumstances in the case which, but for that fact, would have denoted consent on the part of the girl.

I am, &c.
Fra. Jackson,
J. Edward White, Esq. Clerk to the Justices.

246. *Statement of Convictions of D.E. referred to in the above letter.*

Convicted of a misdemeanor at Cambridge Assizes, 20th March 1850, though charged with carnally knowing a child, ——, six years of age; sentence, 18 calendar months' imprisonment with hard labour in Wisbeach gaol.

Subsequently convicted of (indecently, as appears from another account.—J.E.W.) assaulting little girls in Walsoken, and sentence served in Swaffham gaol.

Convicted, 12th October 1863, by Wisbeach, Isle of Ely, magistrates, under the "Aggravated Assault Act," for an assault upon a young female in a field at Tyd St. Giles; sentence, six calendar months with hard labour in Wisbeach gaol. Upon this occasion a man passing by gave him a sound thrashing, which made him ill for a week.

Convicted by Wisbeach borough magistrates, under same Act, November 1865, of an indecent assault upon a young female ——; sentence, six calendar months with hard labour in Wisbeach gaol.

Ed. F. Burrows,
30th November 1866. Gov. Wisbeach Gaol.

247. *Case at the Hillington Petty Sessions.*

At the Hillington Petty Sessions, on Monday last, five of those young girls (from a village in West Norfolk.—J.E.W.) were charged with brutally assaulting an old man 80 years of age, on the 6th of September last (1865). The plaintiff is a poor old man, very infirm, being blind with one eye, very deaf, and unable to walk without the aid of two sticks. The gang in which the defendants work is known as "A——'s gang," who on the day in question were going to their work, when they came up with the plaintiff. The defendants seized him, took away his sticks, dragged him into a field, tore open his trousers, and most indecently assaulted him, by applying a quantity of gas tar to his person, and stuffed his clothes with stinging nettles. The defendants pleaded guilty to the charge of using the tar, but pleaded in extenuation that the old man had been in the habit of exposing his person to them. A——, their gang-master, who spoke on behalf of the defendants, said that he had cautioned the old man, but admitted that he never saw anything disreputable in him, although he had seen him on the road hundreds of times. The plaintiff had three respectable witnesses present to speak as to his good character, but the magistrates would not hear them. * * * A—— confessed to his having suspected the use of the tar, and also to having supplied them with it. The magistrates dismissed the case by cautioning the defendants as to their conduct for the future, and it is hoped that A—— will exercise proper command over his gang in the future also.

[The above was forwarded to me by a lay county magistrate, with the note that he had "ascertained the report of the case to "be correct."]

248. The following account of a late case near Peterborough was forwarded to me by a gentleman of position in the neighbourhood, with the remark that it furnished "a good illustration of some of the evils "attendant upon the gang system." It is an extract from a local newspaper, but from the source from which I received it, and from other accounts which I have confirming it, I did not think it necessary to refer to the depositions. I am informed by another gentleman in the neighbourhood, though I have not formal proof, that it is the man's third offence, and that within a week or two after this conviction he committed an act of the same kind in the open field with a female gang worker aged about 20, she being a consenting party.

249. *Case before the Magistrates at Fletton.*

F. G., ganger, residing at ——, was charged with drunkenness and indecent conduct on the 21st October (1865). Mr. ——, who appeared for defendant, said he should plead guilty to the charge. His client was a hard-working man, but given occasionally to drink. On the day in question he had been treating two young girls belonging to his gang with drink, and he did what he was charged with while under the influence of liquor, the girl being a consenting party. * * * * Police constable ————, was then examined by the Bench, and deposed that on the Saturday evening in question he was coming from ———— to ————, and saw the defendant in an indecent position with a girl named ——, 16 years of age. The girl was almost mad drunk, and the defendant was the worse for liquor. There was another girl with them, named ——, also drunk. The defendant had been treating the girls with liquors and old beer. He went up to defendant and caused him to desist, whereupon the whole of the party, especially the (first) girl ——, used most obscene language towards him. The defendant was a married man. Witness had a great deal of trouble to get him away. —The magistrates' clerk said the defendant had been ganger for about 24 years. * * * The magistrates then retired to consider their judgment, and on their return into court, Lord Sherard said it was well that the defendant had pleaded guilty. It was one of the most disgraceful cases that had ever come into a petty sessions court. The defendant had taken advantage of his position as ganger, to interfere with these children, for so he might term these girls, and the court felt it their duty to inflict a penalty of 1*l.*, and 1*l.* 0*s.* 10*d.* costs, or in default six weeks' imprisonment.

[According to another account the court said that the "defendant, who was set over a lot "of young people not only as a taskmaster, "but as a protector to a certain extent, had "made the basest use of his authority to "contaminate their morals."]

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250. The following letter was received in reply to an inquiry which I made with a view of testing the correctness of the statement by the witness No. 169, as to the imprisonments of his former gang-master and his wife, who are the L. M. and N. M. referred to in the letter, and to which I added a request for other kindred information.

251. *Letter from Mr. Geo. Moore Smith.*

Whittlesey,
22nd December 1866.

Dear Sir,

In reply to your letter of the 17th instant, I beg to hand you the following extracts from my Justices' Clerks' minute book.

H. J. was the nominal keeper of a gang in Whittlesey; K. J., his wife, being the actual manager. At a Petty Sessions held at the Town Hall in Whittlesey on the 3rd November 1864, present Thomas Bowker, Esq., and another, H. J. was charged with stealing a cap, and the case was clearly proved, but medical evidence was produced to show that the man was of unsound mind, that he had been already confined in a lunatic asylum, and was not responsible for his own acts, and the case was therefore dismissed.

At a Special Sessions held under the provisions of the Criminal Justice Act, on the 5th November 1863, before Thomas Bowker, Esq., and others, the said K. J. was convicted of stealing potatoes belonging to ——, and sentenced to one month's imprisonment. She, with a gang of 12 children, was employed to pick up potatoes after the harrows, and the worst feature of the case was that she made the children the instruments of the felony, and they concealed the potatoes in their dinner baskets. She was taken into custody on her way home in her donkey cart, and their baskets were found in the cart so filled, besides about a bushel more potatoes lying loose at the bottom of the cart.

Against L. M. and N. M., his wife, who *are still* in charge of large mixed gangs, the following (amongst other minor offences) have been dealt with by the Whittlesey Bench, the brutal tempers of both the man and woman being notorious :—

At a Sessions held on the 4th June 1857, before Thomas Bowker, Esq., and others, L. M. was charged with assaulting ——, a married woman, and was reprimanded and ordered to pay costs, 7*s.*

On the 18th June 1857, before Thomas Bowker, Esq., and another, N. M. was convicted of assaulting ——, and suffered seven days' imprisonment (part of 14 days' imprisonment adjudged in default of payment of penalty and costs).

On the 28th July 1858, before Thomas Bowker, Esq., and another, L. M. pleaded guilty to a charge of malicious injury, was convicted and sentenced to pay 15*s.*, or one month's imprisonment.

On the 28th November 1865, before Thomas Bowker, Esq., and another, L. M. for assaulting and threatening to kill his wife was ordered to find sureties of the peace, or in default to be imprisoned.

On the 18th January 1866, before Thomas Bowker, Esq., and others, N. M., charged with assaulting ——, was reprimanded and ordered to pay costs, 11*s.* 6*d.*

On the 2nd April 1866, before John Waddelow, Esq., N. M., in default of finding sureties of the peace, was sentenced and committed to one month's imprisonment for assaulting and threatening her husband.

Nothing can surely better prove the evil of the present system than that *such* people should never once have been brought to justice for offences of a similar character towards the poor children under their charge, when their vile tempers will not even suffer themselves or neighbours to live in peace. The evidence tends, as it appears to me, to demonstrate that there are reasons weighty enough in the minds of the poor to cause offences to be concealed, and does not prove that such offences do not exist.

I am, &c.
Geo. Moore Smith,
Justices' Clerk for the Liberties of Whittlesey and Thorney.

J. E. White, Esq.,
Children's Employment Commission, 1862.

Cambridgeshire.

252. The following are extracts from a return received from an employer in Cambridgeshire too late for insertion with other evidence relating to the same parish. The numbers, (8) and (10), refer to the questions in the Form.

253. WISBEACH, ST. MARY'S. (*See sup.* Nos. 204 and 205).

(8.) It depends much upon the character of the ganger.

(10.) In wet seasons children are often wet above the knees for several days together whilst weeding corn, causing severe colds, which are very trying to weak constitutions. Otherwise I think their work, if not too far from home, (the distance is stated in the Return to be "sometimes six or seven miles."—J. E. W.), healthy and invigorating.

Dear Sir,

* * * I will proceed briefly to show what I consider the chief evils of the system :—First, then, it is a great hindrance to education, inasmuch as children are taken from school at such a tender age that they can at best but have attained the very smallest amount of learning and that little, is often well nigh all lost after a six or eight months' work in a gang, so that it takes most part of the next winter's schooling to bring it up again to its former state of proficiency.

But this may be considered as a very small evil compared with the low state of morality which it engenders, and that more especially where the sexes are mixed, which is commonly the case in this neighbourhood. So baneful indeed are its influences on the rising generation, that I believe it to be next to an impossibility for any girl who has worked a season in a gang to grow up into a *modest respectable woman* or for a boy to be otherwise than *grossly sensual and profane.*

Allow me now to suggest how the evils I have named may in some measure be mitigated :—First, then, I think no child under 9 years of age should be allowed to work in a gang. Secondly, on no account should boys and girls be suffered to work in the same gang. Then the ganger or overlooker should be a duly qualified person of good character, who should produce a certificate signed by the clergyman of the parish in which he resides together with the churchwardens and overseers, to the effect that he was a fit and proper person to act as ganger. He should then be sworn before a bench of magistrates, who should also have power to revoke his licence on it being proved that he had in any way misconducted himself in his capacity as ganger.

I do not think I can suggest anything further, so must beg of you to pardon my long silence.

Believe me, &c.
Edw. S. Oldham.

J. E. White, Esq.

CIRCULAR OF INQUIRIES. (Referred to in section 24 of Report.)

AGRICULTURAL GANGS.

Parish of , *in the County of* ; *Population,* .
Extent of Acreage, .
Dated *day of* 1866.

1.—If any system of employing persons in gangs in agricultural labour exists in your parish, explain its nature, and state the number of the gangs.
2.—What is the aggregate number of persons, male and female respectively, so employed, and how far does this number vary in the course of a year?
3.—What is the range of the ages of such persons? Give, as nearly as you can, the following particulars, viz :—

NUMBER AND AGE OF PERSONS EMPLOYED.

Males.					Females.					
Under 7.	Between 7 and 13.	Between 13 and 18.	Over 18.	Total Males.	Under 7.	Between 7 and 13.	Between 13 and 18.	Over 18.		Total Females.
								Unmarried.	Married.	

4.—In what kinds of work are they employed, and during what periods of the year?
5.—To what distances do they go to work?
6.—What are their hours of work upon the land, usual and occasional? and what are their hours, usually and occasionally, reckoning from the time of assembling to go to work to that of arriving back from work?
7.—What are the times allowed for meals?
8.—How are the workers treated?
9.—Do the sexes work together or apart.
10.—What is the influence of the employment upon their physical condition?
11.—What is the state of education?
12.—What is the moral condition?
13.—Any general observations upon the gang system.

FORMS of SCHOOL CERTIFICATES required by the PRINT WORKS REGULATION ACT. (Referred to in section 70 of Report.)

SCHEDULE (A).

I.—FORM of SCHOOL CERTIFICATES for one child.

I hereby certify that the child A. B., son (*or* daughter) of C. D. and E. F., residing in , attended the school kept by me at , for the number of hours and at the time on each day specified in the columns opposite to his (*or* her) name,

During the several weeks ending the day, month, and year stated in the first column.

Week ending Saturday.			Monday.		Tuesday.		Wednesday.		Thursday.		Friday.		Saturday.		Total No. of Hours during the week.	Signature of Schoolmaster.	Date of Signing.
Day.	Month.	Year.	From.	To.	From.	To.	From.	To.	From.	To.	From.	To.	From.	To.			

No part of the school attendance certified shall be valid for a longer time than six months after the date of such attendance; and if a child for whom this form of certificate has been given shall cease to be employed in the print work to the occupier of which such school certificate was delivered, the child's parent, or any person having direct benefit from the wages of such child, shall be entitled on demand to have the said certificate restored to him.

II.—FORM of SCHOOL CERTIFICATE which may be used when two or more children employed in the same print work attend the same school.

I hereby certify that the children whose names are under written, employed in the print work of , at , in the parish of , and county of , attended for the number of hours and at the time specified in the columns opposite to their respective names, at the school kept by me at , in the parish of , and county of .

During the week ending on Saturday the day of 18 .

Child's Name.		Monday.		Tuesday.		Wednesday.		Thursday.		Friday.		Saturday.		Total No. of Hours during the week.
Surname.	Christian Name.	From.	To.	From.	To.	From.	To.	From.	To.	From.	To.	From.	To.	

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COPIES

OF A

Report made by Mr. Dickinson, Inspector of Mines, upon the Oaks Colliery Explosion, and with reference to the Prevention of such Occurrences;

AND OF A

Report made by Mr. Wynne, Inspector of Mines, on the Explosion at Talke o'th'Hill, with the Evidence taken before the Coroner's Inquest.

Whitehall,
22d March 1867.

BELMORE.

Presented to both Houses of Parliament by Command of Her Majesty.

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FOR HER MAJESTY'S STATIONERY OFFICE.

1867.

COPY of a LETTER from JOSEPH DICKINSON, Esq., Inspector of Mines, to the Right Hon. S. H. WALPOLE, M.P., Principal Secretary of State.

SIR, Pendleton, Manchester, 8th February 1867.

I HAVE the honour to enclose my Report upon the Oaks Colliery Explosion, and with reference to the prevention of such occurrences.

I have to attend a meeting of the Coal Commission in London at the beginning of next week, and if there be any point upon which you may wish to see me I could call at the Home Office.

The copy of the evidence taken by the shorthand writer, and other papers, are with Mr. Blackwell. If they are to be of further use they might advantageously be handed over to Mr. Morton's successor.

I have, &c.
(Signed) JOSEPH DICKINSON,
Inspector of Mines.

The Right Hon. S. H. Walpole, M.P.,
Principal Secretary of State.

REPORT UPON THE OAKS COLLIERY EXPLOSION.

SIR, Pendleton, Manchester, 7th February 1867.

As you are anxious to know the views of the Inspectors of Mines upon the fearful accidents which have lately taken place in collieries, with a view of seeing what steps can be taken to prevent such occurrences in future, I have the honour to send the following account of the Oaks Colliery Explosion, which I am preparing as part of my annual Report.

Mr. Morton's health having broken down under the intense excitement and anxiety consequent upon the calamitous explosions in the Oaks Colliery, I have, in obedience to the commands contained in Mr. Waddington's letter of the 26th of December last, supplied his place, as Inspector of Coal Mines, at the inquest.

The inquiry was conducted by Mr. Thomas Taylor, one of the coroners for the county of York, and was concluded on the 31st ultimo. It extended to 13 days, during the latter 11 of which I was present. From the evidence it appeared that the first explosion took place on the 12th of December, when 340 work-persons were employed in the colliery, of whom only six have survived the injuries, making the loss of life 334 by that day's explosion. In addition to this, 27 persons, of whom four belonged to the colliery, and 23 who were volunteers, were killed by a succession of explosions (arising as it would appear from the pit having been set on fire by the first explosion), which commenced on the following morning whilst the workings were being explored for the purpose of rescuing any persons who might have survived and the bodies of those who had perished. It was only into the cause of the explosion on the 12th that the coroner's inquiry has at present extended. Of those who were down the pit when the explosions commenced on the 13th only one person escaped, and he is alive. The whole of the 27 bodies, including those of Mr. Parkin Jeffcock, mining engineer, Mr. David Tewart, under-viewer of the colliery, Mr. Smith, under-viewer of Lund Hill Colliery, are still in the pit; there has therefore not as yet been an opportunity for an inquiry by the coroner into the cause of these deaths.

The pits being now closed up for the purpose of extinguishing the coal which has been set on fire by the explosions, and as a long time must necessarily elapse before they can be safely reopened, I may observe, with regard to the second and succeeding explosions, that sad as the result has proved to be to the explorers, it would have been much sadder but for the observation of a slight change perceived in the direction of the air by one of the deputies named Matthew Haigh, who attributed it to a flash of gas, and who made his escape, alarming a great number of others on his way out, and in this way saved the lives of six cagefulls of men, who rushed in a panic up the pit, the number on some of the cage loads being stated at as many as 15 in one load. The timely warning given by him was therefore apparently the means of saving between

60 and 90 lives. It is difficult to restrain persons from going into pits after an explosion when there may be a possibility of saving life, or for rescuing the bodies; but feeling should not be allowed to overcome judgment, and the danger of any unnecessary number of persons being allowed to go down at one time for this purpose ought not to pass unimproved. The deputy who in this instance saved so many lives was it seems called a coward, whilst rushing out; whereas in reality he was showing sound judgment; and on a similar occasion, at the Edmonds Main Colliery in the same neighbourhood, a few years ago, Mr. Morton, the Inspector of Coal Mines, Mr. Woodhouse, and Mr. John Brown, colliery viewers, were hooted from the pit bank for preventing persons going down, the soundness of their judgment being proved by a serious explosion which followed in the course of a very short time.

Of the 361 lives which have been lost in the Oaks Colliery on the 12th and 13th of December, 286 now remain in the pit. It is the most serious calamity which has occurred in any colliery in this or perhaps in any other country. Excepting, however, in the greater magnitude of the number of lives lost, there is nothing in which the explosion differs from a large number of similar occurrences; and there has been no special difficulty in the investigation.

From the testimony of the witnesses, there were large accumulations of fire-damp in the goaves. The gas there was in addition to the ordinary discharge of fire-damp, which appears to have been considerable; and the mine had been known on four occasions to give off suddenly immense outbursts of fire-damp without any explosion occurring, the safety lamps with which the mine was exclusively worked having on the occurrence of the outbursts proved sufficient for the gas to pass away safely. On the present occasion there appears to have been gas enough accumulated, together with that being gradually given off in the mine, without going into the supposition of any extraordinary outburst. The explosion took place at twenty minutes past one in the afternoon. That would be at a time when active work had been going on in the pit nearly the whole of the day. The pit would have been liberating its largest quantity of gas, owing to fresh "faces" being opened. It would also be nearly the warmest part of the day, when the atmosphere would be most expanded, and any given quantity of air have the least diluting power. It would also be the time when, by the rise of the temperature, the ventilating power of the furnace would be least efficacious. It was also at the time when one of the ventilating furnaces was slackened for cleaning. In addition to this, the barometer was falling. At one o'clock in the morning the pressure was 30·10, and at the time of the explosion 29·55. This fall in the pressure would cause each 1,000 cubic feet of confined air and gas to expand, and give off 18 cubic feet. Then, as to the temperature, in the morning it was 37°, and about the time of the explosion 48°. The expansion would therefore be in the ratio of 496 to 507, which is equal to from 1,000 to 1,022. So that this change of temperature would cause each 1,000 cubic feet of confined air and gas to give off 22 cubic feet. The combined effects of the falling of the barometer and the rise of the thermometer would cause each 1,000 cubic feet to throw off $18 + 22 = 40$ cubic feet, or 4 per cent. of the volume of confined air and gas. This would be in addition to the ordinary discharges of gas. In the state in which some of the goaves of the pit had been described to be at the time, I think we have sufficient fire-damp to account for the explosion, without supposing any extraordinary outburst.

As to how the fire-damp became lighted no clear evidence has been adduced. The safety lamps all appear to have been examined and locked as required, and the work persons seem to have been sufficiently aware of the danger to deter them from opening the lamps, as they sometimes do, although it is prohibited by a penalty of fine or imprisonment. There is the possibility that an accident happened to a lamp. But besides those safety lamps there were open gaslights extending from the bottom of the downcast shafts for 150 yards along the old south level, and also for 400 yards down the engine plane. There was also an open light occasionally used for relighting safety lamps at a lamp cabin called Thompson's box hole, 800 yards down the plane. Blasting was entirely prohibited in working the coal, but there was a new stone drift being driven from near the downcast shafts to some steps going down into a travelling road, in the main intake air-way, where blasting was allowed. There was no doubt from the evidence that the explosion took place when a shot was being fired, as several men, some of whom have survived, were warned into a sheltered place at the bottom of the shafts, and one of whom stated that the explosion of fire-damp followed the shot in about the space of time that it would take to count two after the shot had gone off. The drift was nearly through to the steps, and the shot, instead of blowing the stone out into the drift, as the previous shots had done, blew the bottom of the hole out, and the powder was discharged on to the steps, leaving the stemming and a partition of rock at the top of the hole undisturbed. The shot therefore went into a part of the mine where none of the previous shots had been discharged. The depth of the hole from which the powder had been fired was stated at about 30 inches, in addition to which it would seem there were 6 inches more from the traces of it which remained on one side from which the bottom had not been blown. That would make about 3 feet in length of powder. The hole, exclusive of the 6 inches, had been measured by another witness to 2 feet 7½ inches. The diameter of the drills with which the hole had been driven was not accurately known, but was supposed to be 2⅛ inches. According to these dimensions there was, therefore, a very much larger charge of powder being used than usual, apparently amounting to more like 6 lbs. than the smaller quantities of 1½ or 2 lbs. that the witnesses supposed. It seems reasonable to conclude that they were using a larger charge for the purpose of getting the drift through to the steps; and as the body of Wilson, the deputy who fired the shots, was found on the engine plane at the top of the steps, it would appear that he had gone there for the purpose of keeping persons off the steps, which was a main thoroughfare, whilst the partition was being blown through. The effect of such a large charge of powder fired in that part of the mine would be a considerable concussion in the air. The flame also from such a shot when it blew out of the hole would extend to a considerable distance. Whether the flame lighted any fire-damp in any of the old "slits" or "cut-throughs" at the south side I am unable to decide; but the concussion would certainly tend to disturb the gas accumulated in the goaves. There was an opening which had been made up with a stopping from near the bottom of the steps into the south return. That was in addition to an opening with two doors in it which went into the main south return air course. In addition to these also it appeared there were other "slits," any one of which, if not tightly made up, may have allowed the concussion of air to act upon the return air. Besides there was a clear open course along a lower level called the new level. In that part of the mine it would act upon the goaves containing gas, which was proved to be there by Cadman, the fireman, and by Bates and Thompson. How far that gas might have been disturbed, and brought in contact with any of the allowed open lights, I am unable to decide; but I incline to the opinion given by some of the witnesses, that of all the allowed open lights those along the old south level were the weakest points. The fire-damp might there have been lighted, and it would run back in a train to the goaves. I consider this not unlikely, as it would give us a centre from which the main blast had apparently radiated such as would reconcile the effects which appear to have been produced. The blast, as it was found to have done, would thus drive out along all the south levels, and the opposing force would become neutralised by one part of it coming against the other at the upper part of the engine plane, as it appears to have been.

In considering to what such a state of things was attributable, I have first to observe that there seemed to have been no want of care or discipline in carrying on the work, and the special rules duly established and enforced at the colliery were of the most stringent kind, supplying all that could be anticipated as a requisite for safety as contemplated by the Act of Parliament. The colliery was under the management of Mr. John Thomas Woodhouse, one of the most eminent mining engineers in this kingdom, and under him there was Mr. John Edward Mammatt, the resident viewer, who was 27 years of age, and who had been trained up to the profession of a mining engineer. Besides these gentlemen there was Mr. David Tewart, the under-viewer, who was a practical manager, and a staff of deputies, firemen, and eight lamp persons (six men and two boys).

The ventilation was skilfully laid out, and excepting at the rise side of the pit (where nearly all the coal was worked out, and not much fire-damp remained to be contended with, and which could not be more advantageously ventilated by any other plan), and in the small part of the workings called the dip-slant, where some new work had recently been commenced, the whole of the ventilation was being conducted upon the ascensional system. There were two downcast shafts, each 285 yards in depth and 7½ feet in diameter, and one upcast shaft the same depth, but with a chimney at the top, and 10¾ feet in diameter. The ventilating power was a pair of furnaces side by side, the fires being fed with fresh air, the return air from the workings being sent into the upcast shaft 70 yards from the furnace. The total quantity of air going down the downcasts amounted to about 152,000 cubic feet per minute. Of this 17,000 cubic feet supplied the furnaces, the remainder, 135,000, being divided into nine main splits or divisions, and used for ventilating the workings. The workings extended about a mile to the south along the old south level, and about a mile to the deep down the engine plane, but not so far to the north and west; the total length of underground galleries or roadways that were open, exclusive of the numerous goaves, being about 50 miles. The water-gauge, or pressure between the downcast and upcast shafts, was stated at rather less than one inch of water. This low pressure shows that for this extent of underground workings the air-ways must have been spacious, and the large quantity of air shows that the areas of the shafts, which, although small for the extent of workings, were, with such spacious air-ways, large enough for the supply of adequate ventilation.

In the far end of the Dip North Level there was an issue of fire-damp at a fault, which was collected and piped to the downcast shafts, and it was the gas that was used for lighting. An idea was suggested that this was the feeder which caused the explosion. The smallness of the quantity, however, and the way in which it was conducted in pipes, seems to preclude any such possibility. The total quantity only amounted to between 80 and 90 cubic feet per hour, or only about 1½ cubic feet per minute. This would be only a small proportion of the gas given off by the whole of the workings. What the total quantity was is not known; but it would now appear, from measurements taken since the pits have been closed up, when of course no fresh surfaces are being exposed in the coal so as to liberate fresh feeders of gas, but including any gas that may be given off by the decomposition of the bodies of the persons and the horses, and by the fires, reaches to about 550 cubic feet per minute, as it issues out of the pipe at the top of the shaft. The utilizing of the feeder of gas from the fault seems therefore to have been unobjectionable, and is in accordance with what I have seen safely practised in different collieries in Lancashire.

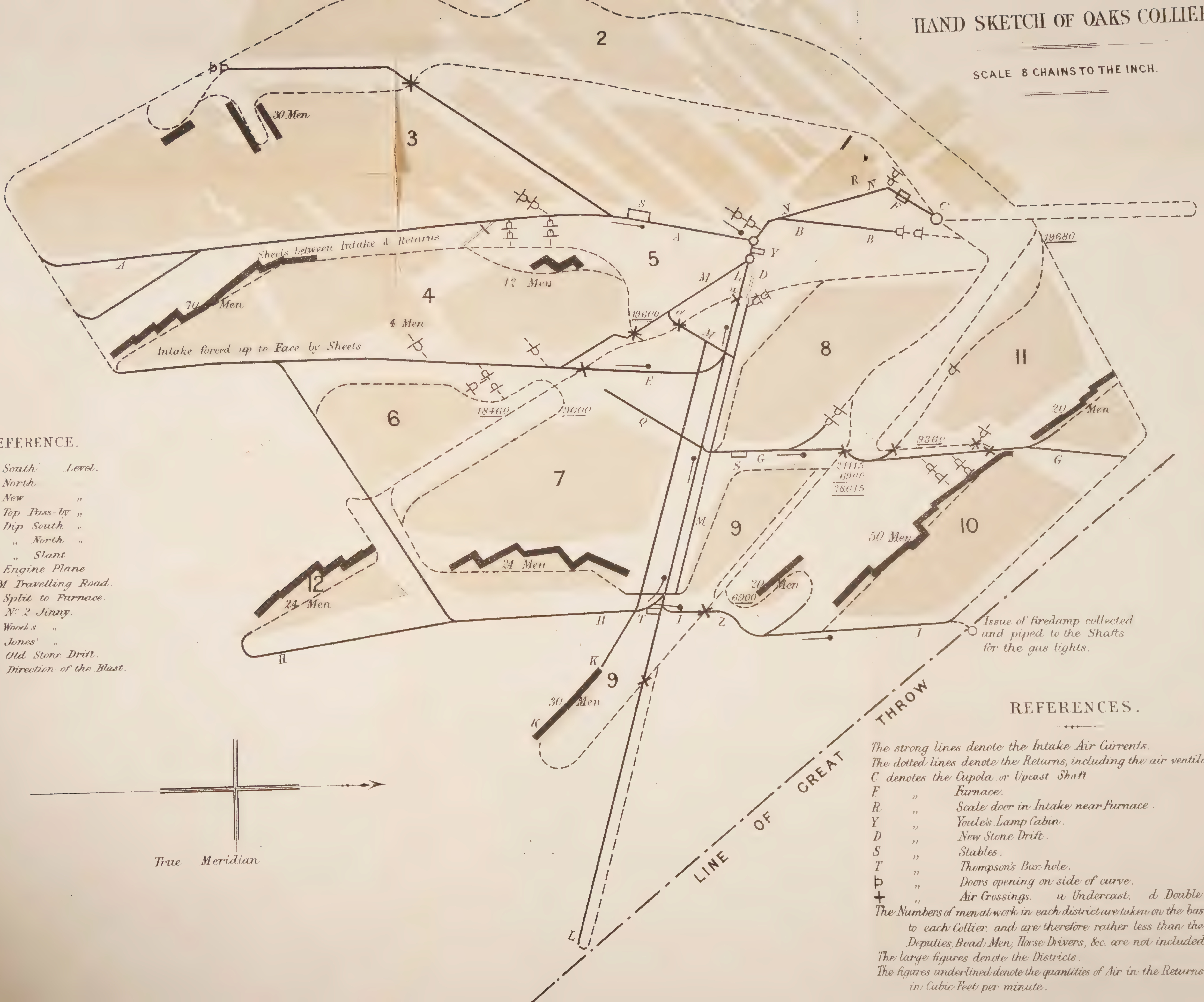
To what then is the cause of the explosion to be attributed. In my opinion clearly to the system upon which the colliery was worked. The seam of coal is known as the Barnsley bed. It is about 8 feet thick, and is notoriously fiery. The old workings at the rise of the shafts, and which were nearly finished, were upon the old Barnsley system; and it was in those workings and under that system that the explosion which took place in this colliery on the 5th of March 1847, when 73 lives were lost, occurred, and under which several of the other great explosions in the neighbourhood of Barnsley have occurred. The workings at the deep of the shafts, where the present explosion originated, were upon the long-wall system. The whole of the working faces open at the time of the explosion, on the 12th of December 1866, amounted to about one mile in length. These faces, and the goaves behind them, some of which contained the fire-damp described, as well as other goaves where the work was finished, were scattered about in various parts of the workings, as shown on the annexed sketch. The working places were at the rise side of each goaf, going up hill at an inclination of about 1 in 12, so that any fire-damp which might become dislodged from the goaves, by the roof falling or some other derangement, would at once go upon the men in those faces. The gate-roads by which the coal was brought from the faces came down through the goaves, the roof at the sides being supported with pack-walls. The pack-walls were built of stone which fell from the roof of the goaves, and it had to be brought out from behind the temporary supports called "chocks" at the faces. In getting this stone out the miners had to leave their safety-lamps outside, and go in to the goaf in the dark. The present system of working appears to involve this reprehensible practice, and it appears to be common to the other collieries worked upon the old system, and the long-wall system as now practised in this seam at Barnsley.

I am well aware that the system of working coal in any district is not a thing to be interfered with, except on the necessity becoming apparent. It has generally been arrived at after the trial of a great number of different modes, and is that which is found to be the best under all circumstances. To attempt to interfere with the recognized system of a district, except at a time like this, when the perception of every one is quickened, would be certain to produce no effect; but the necessity has, to my mind, now appeared, and it behoves the mining engineers interested in the management of these mines to forthwith take the matter into their most serious consideration, in order that a suitable system may be introduced. To bring about an altered system will be a work of time, even if it be set about at once, and great explosions may happen during the transition.

In the course of the inquiry various suggestions were given by the witnesses as to how the system of working should be modified. In the opinions of some safety was to be found by working the faces down the hill, instead of up, so as to keep the gas away from the face of work; whilst others considered that course would be dangerous, on account of the roof and coal being forced down by the weight, and that the accidents which would in that way set in would be more serious than those which would be avoided. Another proposition was to modify the old system of working in banks, so that the working faces should go horizontally and at the low side of the goaves, involving the working faces of the coal, as the seam lies here, to be on the end of the cleavage instead of on the face, as usually practised, and which is only seldom found to be advantageous in practice. What is called the panel system, that is by dividing the colliery into distinct compartments, was also proposed, but in no instance did any

HAND SKETCH OF OAKS COLLIERY.

SCALE 8 CHAINS TO THE INCH.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Intake forced up to Face by Sheets
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30 Men
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L
LINE OF GREAT THROW
True Meridian

Issue of firedamp collected and piped to the Shafts for the gas lights.

REFERENCE.

A A South Level.
B B North „
E E New „
G G Top Pass-by „
H H Dip South „
I I „ North „
K K „ Slant
L L Engine Plane.
M M M Travelling Road.
N N Split to Furnace.
P No. 2 Jinny.
Q Wood's „
V Jones' „
Z Old Stone Drift.
—● Direction of the Blast.

REFERENCES.

The strong lines denote the Intake Air Currents.
The dotted lines denote the Returns, including the air ventilating the
C denotes the Cupola or Upcast Shaft
F „ Furnace.
R „ Scale door in Intake near Furnace.
Y „ Youle's Lamp Cabin.
D „ New Stone Drift.
S „ Stables.
T „ Thompson's Box-hole.
Ь „ Doors opening on side of curve.
+ „ Air Crossings. u Undercast. d Double Invert.
The Numbers of men at work in each district are taken on the basis of One
to each Collier, and are therefore rather less than the actual
Deputies, Road Men, Horse Drivers, &c. are not included.
The large figures denote the Districts.
The figures underlined denote the quantities of Air in the Returns at those
in Cubic Feet per minute.

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colliery

witness know of any colliery that was being so worked; and it was stated that one of the greatest explosions in the Wallsend Colliery took place when this system was being tried.

It may be premature to suggest at present what in my opinion the system should be; but from what has come under my observation I am strongly impressed with the view that the system which I brought under the notice of the Select Committee of the House of Commons on Mines last year, and to the extension of which system in my own district I attributed the diminution which had taken place in the number of accidents and lives lost, concurrently with a large increase in the number of persons employed, is suitable for this seam. Under this system the levels are first driven out to the far ends, and the coal worked back from the extremities, having a substantial pack-wall built about three yards in width at the side of each working face. In this way all the goaves are left behind, and the pack-walls support the roof, and enable the ventilation to be kept up in the goaves sufficiently far from the working faces. By having more men in the same face of work than only two in from about eight to as much as 30 yards, as practised at Barnsley, the space of pit-room requisite to be kept open at one time might be much lessened, and the ventilation simplified. In Lancashire as many as eight men are sometimes put into such spaces of work as the above named. Putting so many men into one place is not, however, unattended with some disadvantages, as men, when crowded together, cannot get so well on with their work, and the noise sometimes prevents them from hearing when falls of coal and roof are about to take place, so that accidents from this cause become more numerous. The accidents in Yorkshire from all causes have been few in proportion to the coal raised and the number of persons employed, the great drawback being the occasional occurrence of very serious explosions. Under the present system the coal is got at as cheap a rate as any, but it has the counterbalancing disadvantage that a colliery owner may have a splendid property one day, and the next day it may be a wreck, and the pits, as in this instance, be closed.

It has been suggested that the area of coal to be worked by a pair of shafts, and the number of persons allowed to be down at one time, should be limited; and this view is entertained by some mining engineers whose opinions I respect. For my own part I consider that we live in the days of progress, and that as the sinkings become deeper we shall have to extend the area and increase the number of men. I look for increased safety to having the workings upon a proper system, such as I have recommended, and which answers well, and is found to be economical in the long run in my own district.

The jury, after, as it appeared, a good deal of discussion, agreed to the following verdict: "That Richard Hunt and others were killed by an explosion of gas or fire-damp "at the Oaks Colliery on the 12th of December 1866, but there is no evidence to "prove where or how it ignited. The jury think it unnecessary to make any special "recommendations as to the working of mines, seeing that the Government are "collecting information no doubt with a view of the better protection of life, but they "think a more strict inspection desirable."

As regards the recommendation of a stricter inspection, my opinion is well known. In my Reports for the years 1858 and 1862, and also at other times, I have gone into the subject, and shown what I believe to be the real scope of the Government inspection of mines. I may repeat what I have said, to the effect that "it is not intended, nor is "it desirable, that the inspectors should act as the viewers or managers of the collieries, "but to be in the districts that matters may be referred to them; that in case of com-"plaint or reason to suspect danger, the pits may be inspected, and the requisite steps "taken to remedy it without an accident occurring; and that when any accident has "occurred, which appears to require it, investigation may be made, in order to ascertain "whether the provisions of the law have been complied with, and that, if necessary, "the penalties for neglect may be proceeded for. It is apparent that when accidents "have occurred investigations press the responsibility of the management upon the "only parties to whom it attaches, and are the means of causing precautions to be "taken which are likely to prevent a recurrence. Mines continually require attention. "New roads are daily being made as the coal is worked, requiring renewed propping "and frequent changes in the ventilating arrangements, and the ventilating power must "be regularly kept up; wear and tear are also constantly going on of the ropes, steam "boilers, machinery, pit shafts, &c. If the view taken by some parties, therefore, that "inspection should reach further than this, were acted upon, it would tend to relieve the "owners and managers of mines of the responsibility which now devolves upon them, "and to throw it upon the Government, which, unless the inspectors were made as

" numerous as the managers, and had an equally numerous staff, with power of control " over the expenditure, they could not possibly undertake."

By making my views known in this way the miners are aware that if there be any removable danger which the managers are neglecting to remove, they must inform me of it, or else there is very little chance of its coming under my notice, and they must stand the consequences. The result is, that in a large number of instances they do so bring it under my notice, and remedies are applied. It would be unwise, however, to suppose that all the knowledge of coal mining is wrapt up in the inspectors. In the case of the Oaks Colliery the management was in the hands of Mr. Woodhouse, whose emoluments as a mining engineer and viewer are far beyond those of an inspector ; and Mr. Mammatt, the resident viewer, was the very material of which the inspectors are constituted, and from which, as vacancies occur, they have to be recruited ; whilst in the under-viewer and the deputies and firemen is to be found the very class from which some persons appear to expect so much, if they were acting under the Government, instead of being, as they were, the responsible managers in their several departments. The subject should be looked at fairly and calmly. If the inspection becomes too frequent the inspectors would be likely to become implicated in the management, and when an accident takes place their position would not be sufficiently disinterested to enable them to make an independent investigation, and it would require for that purpose some disinterested person to be called in to see that the provisions of the law were enforced, thereby tending to lower the standing of the inspector, and lessen his usefulness in his district. The districts, if made small, would also lessen the opportunities for comparison, which it is requisite there should be, for the spread of improvements. This necessitates the duties of an inspector being very laborious, and I do not see how it can be otherwise, unless an assistant could be given to each, as was suggested to the Committee on Mines last year by Mr. Woodhouse. The responsibility must rest somewhere. Hitherto it has been decided that it is best upon the owners and managers. But if it be intended that the Government should assume the responsibility, then the whole subject of the inspection will require reconsideration.

So far as inspection might have been brought into play at the Oaks Colliery, it appears that on the 30th of November, just 12 days before the explosion, complaint of fire-damp in a certain part of the workings (together with a question relating to wages) was made to the principal owner of the colliery, who was himself conversant with coal mining. He said if that be so both the men's lives and my property are at stake, and he forthwith, in company with the deputation and the under-viewer (the viewer being from home), proceeded down the pit to the place complained of, and made examination. It appears no gas was found, but the ventilation of that part was weak, and it was arranged that the under-viewer should send more air there. It seems it was discussed amongst the miners whether Mr. Morton, the inspector's, attention should be called to the matter, but it was decided not to do so; and that opportunity of avoiding the explosion was lost. The health of Mr. Morton had not been good for some time lately, he having suffered severely from rheumatism, in which he was by no means an exception amongst the inspectors, who are much exposed to chills, and when at any time he was unable to attend to any matter, he always had my assistance when he called for it, and so far as I am aware no duty has been omitted. Until his illness set in he was one of the most energetic inspectors, and now that his health has failed the public are deprived of of one who has done good service.

The present Act of Parliament, although not perfect, appears to me to be a very good Act, and anything that is found wanting in it may be supplied by altering the special rules when it becomes apparent. A most important doubt appears to be as to whether the Act extends to the system of working which is followed. In the opinion of the inspectors of mines the system of working is comprised by the Act, and may be arbitrated if it appears to be " dangerous or defective, so as to threaten or tend to the " bodily injury of any person." But a contrary opinion has been expressed by some colliery owners, and it ought not to be involved in doubt. The subject is one of great gravity as regards the working of the Barnsley bed of coal, and if it be not forthwith taken up by the owners and viewers interested, and it is found that the power of arbitration does not extend to it, then addition legislation appears to be essential, and at the same time, if the matter has to be re-opened, the statutes relating to mining might all be incorporated into one, and some slight alterations be made with advantage.

I have, &c.

(Signed) Joseph Dickinson,
Inspector of Coal Mines.

The Right Hon. S. H. Walpole, M.P.,
Principal Secretary of State, Whitehall.

COPY of a LETTER from THOMAS WYNNE, Esq., to the Right Hon. S. H. WALPOLE, M.P., Her Majesty's Principal Secretary of State.

Stone, 2d February 1867.

SIR,

I HAVE the honour to transmit to you my report of the proceedings which have taken place with respect to the sad calamity at Talke-o'-th'-Hill, by which 91 persons lost their lives; and I do not think I can perform that melancholy duty in a better way than by using the reports of the local press, giving the evidence as taken before the coroner's inquest.

I have, &c.
(Signed) THOMAS WYNNE.

The Right Hon. S. H. Walpole, M.P.,
Her Majesty's Principal Secretary of State.

TERRIBLE COLLIERY EXPLOSION AT TALKE-O'-TH'-HILL, NEAR TUNSTALL.

Eighty Lives lost.

It is our melancholy duty to place on record this week the most frightful colliery catastrophe which has ever occurred in the North Staffordshire district—an explosion of fire-damp, resulting in the instantaneous death of eighty persons,—a catastrophe which, following immediately upon the still more destructive explosion near Barnsley, has repeated in an intensified form the thrill of horror which that appalling event sent through the country. The scene of the catastrophe was the colliery of the North Staffordshire Coal and Iron Company (Limited) at Talke-o'-th'-Hill, about three miles from Tunstall and four from Newcastle-under-Lyme. This village stands, as its name imports, on an extensive natural elevation, commanding wide prospects over the great plain of Cheshire and the hilly ridges of North Staffordshire. It is a populous place, and in respectability of appearance far surpasses the average of mining villages. It may also be said of the colliers settled there that they are, as a rule, a decent and orderly body of men, and that several amongst those who have perished were local preachers and Sunday school teachers and members of the North Staffordshire Provident Association and other friendly societies.

The works of the company are situated on the Newcastle side of the village, and consist of an extensive colliery and two blast furnaces. The company was formed two or three years since, and consists almost exclusively of Lancashire gentleman, for whom Mr. Wm. Johnson officiates as general manager. The colliery was opened but 18 months since, and the character of the pit gear and engines indicates a command of ample capital and the best engineering co-operation. There are two main shafts—one upcast and one downcast, which stand almost due north and south. On the south, a shaft has been sunk to the depth of 350 yards, and by its means the seven and eight feet seams of Banbury coal are worked. On the north are the Truro and other seams, and here the shaft is about 60 yards less in depth than on the opposite side of the colliery. The Banbury coal is notoriously a dangerous coal to work, being highly charged with the fearful gas, the combustion of which, ever and anon, hurries scores and hundreds of our fellow creatures into eternity.

On Thursday morning last 180 men and boys descended the pit in pursuit of their ordinary calling; at all events that was the number of lamps issued. It is not known that any reason existed for supposing that the state of the pit on that morning rendered that calling more than ordinarily hazardous, and considering the reputation of the manager and bailiffs, it may be assumed that, in their opinion, the pit was safe. In the course of the morning nothing occurred to excite apprehension, but between eleven and twelve o'clock a terrific explosion took place, the effect of which, within a radius of half a mile, is described as resembling that of an earthquake. A dense volume of black smoke rushed up the shaft, with dust, pieces of coal, and timber. The report and the appearance of the pit bank led to an alarm being at once raised, and speedily a dense crowd, who divined but too accurately the fearful nature of the accident which had taken place, gathered round the mouth of the shaft. For a time the greatest consternation and confusion prevailed, and the scene was of the most heart-rending description. Women and children, weeping and wringing their hands, literally swarmed up the pit bank, and for a time impeded the efforts of the stout-hearted and willing men who addressed themselves to the task of descending the pit to ascertain whether effective assistance was possible. After a time something like order was obtained, and the pit bank was partially cleared.

In the meantime messengers had been despatched in all directions, and there arrived in succession Mr. Greatrex and Mr. Bruce, surgeons, of Kidsgrove; the Rev. M. W. M‘Hutchin, incumbent of Talke, the Rev. F. Wade, incumbent, and the Rev. J. Hignett, curate of Kidsgrove; Mr. T. Wynne, Government Inspector of Mines for the district; the Rev. C. A. Barker, of Chesterton; the Rev. T. Darby, of Audley; Dr. Barnes, of Newcastle; Mr. Salt, Surgeon of Audley; Mr. Gavin Addie, owner of the High Carr Colliery; Mr. Luke Foster, bailiff to Messrs. Bidder, Elliott, and Co.; Mr. C. J. Homer, manager of the Chatterley Colliery; Mr. Coe, colliery manager of Norton; and other gentlemen, all anxious to do their utmost to rescue if possible some of the unfortunate fellows in the pit. Nothing could exceed the humanity and devotion displayed by all classes—by clergymen, colliery managers, surgeons, and workmen. Two of the gentleman named above met at the Hanley Cattle Show, and were considering together whether they should set off to Barnsley, with the view of offering their advice and assistance, when the news of the catastrophe at Talke reached them, and they at once hastened thither. The rev. gentlemen, true to their sacred office, directed their energies to the soothing and consoling of the poor bereaved and excited people by whom they were surrounded, while the surgeons made every preparation which skill and experience could suggest for restoring those in whom life might not have been extinguished.

The pit gear having been considerably damaged by the explosion, some delay unavoidably took place in making the first descent, which was done under the direction of Mr. Johnson and Nicholls, the under-ground bailiff, whose courage and perseverance were greatly admired. The officials first directed their attention to the restoration of the ventilation. Mr. Wynne, accompanied by Mr. Addie, Mr. Foster, and Nicholls, cautiously descended the shaft, but found the bottom so encumbered with fragments of timber, that it was impossible to land the cage. This difficulty having been overcome, the first thing to be done was to extinguish a fire which had broken out in the stables, where several dead horses, frightfully burnt, were found. The exploring party then attempted to proceed along the main road, but found everywhere that the stoppings in the ventilating galleries had been destroyed by the explosion. These had to be replaced, in order to reproduce the life-sustaining currents.

Thus they gradually made good their way, amidst a frightful scene of havoc, stumbling over the dead bodies of men and horses, and members of the party being compelled from time to time to proceed to the surface to recruit exhausted nature. Mr. Wynne remained in the pit about five hours, and at eight o'clock was succeeded in the direction of affairs below by Mr. Homer, Mr. Coe, and Ralph Unwin, bailiff at Earl Granville's colliery at Hanley. These devoted volunteers continued the work of restoring the ventilation, and penetrated to the length of 400 yards, coming in the course of their progress upon eight or ten bodies, which they removed to the bottom of the shaft. Mr. Homer and his party also remained in the pit about five hours, and at eleven o'clock yesterday morning Mr. Wynne, Nicholls, and others again descended. After a laborious prosecution of their arduous duties, extending over four or five hours, they returned to the surface, and reported that they had examined the whole of the workings, and were of opinion that the number of lives sacrificed was about 80.

Having thus attempted to give our readers some idea, however vague, of the nature of the catastrophe, and of the measures adopted for the recovery of the victims, we shall add a few particulars of even more directly human interest. We have said that 180, or, possibly, 200 persons, descended the pit early on Thursday morning, but how many of these worked in the upper and how many in the lower gallery remained unknown until the investigation made yesterday fixed, with something approaching to certainty, the number of the dead. Immediately after the explosion a large number of men, probably nearer 100 than 50, the number at first conjectured, made their escape up the north shaft. Then the exploring party which first descended, before the arrival of the Government inspector, sent up ten or twelve more whom they had found in a state of insensibility at and near the bottom of the shaft. In one or two cases bones had been fractured, but the majority had been asphyxiated by the after-damp, and the medical gentlemen in attendance, after patient and prolonged endeavour, were rewarded by seeing the whole, with one exception, placed out of danger. The principal symptoms were paralysis and tendency to a comatose state, and the means resorted to to restore animation were electricity to the spine, cold douche, turning the face to the earth, the administration of stimulants, and rapid walking to check the tendency to sleep. These remedial measures had not only to be applied to those who were in the pit at the time of the explosion, but to several of the persons engaged in the search for the bodies and the repair of the air-ways, who reeled about the pit bank like drunken men, under the influence of the gas, and declared their readiness to go down again directly they were better.

We had an opportunity of speaking with two or three of those who so narrowly escaped death. One, a youth, said he was lying in the bottom of the dip, waiting for the man whom he was assisting, when a violent wind drove a cloud of slack into his face, and, knowing that an explosion had taken place, he at once made for the bottom of the south shaft. On his way he passed four dead men, but he himself succeeded in getting to the bottom of the shaft where he lost consciousness, or, to use his own words, fell asleep and remembered nothing more until he found himself in Mr. Bruce's hands in the cabin at the mouth of the pit. A man named Taylor escaped in a similar manner, as did also one of his fellow workmen of the name of Johnson, whose story was that he was working in the seven-foot, about 200 yards from the bottom of the shaft, when he heard the explosion, and immediately afterwards was knocked down by the wind. Recovering himself, he made off on his hands and knees towards the bottom of the shaft, but had not gone far before the deadly gas began to operate, for, as he artlessly expressed it, "he came over nice, just as if he had been drinking." Knowing the imminence of his danger he struggled against the desire to sleep, and pushed on. Presently he came upon Thomas Knowles, who like himself was struggling with the deadly fluid, and seemed on the point of yielding. Johnson urged him to lose no time, and thus exhorted he made one more effort to reach the bottom of the shaft, but finally gave in, dropped, and died. Johnson persevered, crawling over dead men and boys, and horses, until at length he reached the haven he had longed for only to sink into total unconsciousness, from which he did not recover until after he had been carried to his own house.

As fast as the dead bodies were brought to the surface they were removed to the Swan Inn, Talke, where they were laid out in two large rows for identification. This was done with a degree of order and decency reflecting much credit upon those who undertook the task. A label bearing the name and address was attached to each corpse as far as practicable, and the sorrow stricken relatives were then admitted. A scene of the acutest distress and anguish followed. We will not dwell upon it, nor, we are confident, do our readers require the repetition of harrowing details to stir within their bosoms the emotion of pity and the promptings of generosity. By two o'clock yesterday morning 58 bodies had been sent up out of the pit, and during the day the remainder were gradually collected at the bottom of the shaft; but, in order to prevent unnecessary excitement, they were not sent to the surface until nightfall. We are, therefore, not in a position to give the precise number of bodies recovered, but we have no doubt that the estimate given above, which is that of the Government Inspector, will be found to be substantially correct.

We are still less able to speak with confidence on the important point of the cause of this terrible calamity; but the prevalent conjecture is, for several reasons, more likely than any other to be correct. The calamitous experiences of the past make it almost unnecessary to say that this catastrophe is popularly attributed to the use of a naked light by one or other of the workmen, but probably the exact truth will never be ascertained. We believe it is a fact, however, that whole bunches of keys for unlocking safety lamps have been found in the pit since the explosion, and that matches were found in the pockets of several of the poor fellows whose lives have been sacrificed.

We cannot close this account of a most sad event without again acknowledging the signal devotion of all classes of persons capable of rendering assistance in any form; whether to save life, to mitigate suffering, to administer religious consolation, to comfort those who had lost their nearest and dearest, or to take measures for limiting as far as possible the destruction of property, and the period during which the surviving workmen will be unable to resume their employment. It is almost invidious to name individuals, but we may mention the Rev. M. W. M'Hutchin, the incumbent of Talke; Mr. Wynne, the Government Inspector of Mines; Mr. Homer, Mr. Johnson, Mr. Coe, Mr. Greatrex, and Mr. Bruce, as conspicuous amongst the many—of whom none were more earnest than the working miners—in doing everything that was possible under the distressing circumstances.

The following is as perfect a list as could be procured of the dead:—

1. Thomas Moulton, Talke, single.
2. Noah Taylor, Audley, married, and family.
3. Charles Dutton, Talke, single (son of Edward Dutton).
4. Samuel Bentley, married, no family.
5. George Hicks, New Road, Talke, married, four children.
6. John Madders, Audley.
7. — Spencer, Red Street, married.

8. Matthew Sherratt, Congleton, single.
9. James Thomason, Audley, married.
10. Ephraim Cumberland, Congleton.
11. Allen Turnock, Talke Pits, a boy.
12. David Colclough, Wood Lane, married, two children.
13. Nicholas Fletcher, married, five children.
14. John Bosson, New Road, a boy.
15. Samuel Slater, Butt Lane, single.
16. David Higgins, Alsager, married, and family.
17. George Kent, Audley.
18. Edward Denby, New Road, married, one child.
19. George Reeves, Butt Lane, a boy.
20. Samuel Kenyon, Talke Pits, married, five children.
21. William Ratcliffe, Talke, married, four children.
22. James Sproston, Audley, single.
23. Thomas Knowles, New Road, widower, six children.
24. William Jenkinson, Butt Lane, married, two children.
25. Frederick Bailey, Audley, single.
26. Edward Dutton, Talke, married, four children.
27. John Hart, Talke, single.
28. James Boughey, New Road, married, three children.
29. Thomas Murray, Audley, single.
30. Peter Frost, New Road.
31. John Breeze, New Road, a boy, support of his mother.
32. William Stanley, Talke, married, no family.
33. James Johnson, New Road, married, and four children.
34. Samuel Cartlidge, Talke Pits, married, one child.
35. William Archer, Hollins, a boy.
36. Thomas Jenkinson, Butt Lane, married, five children.
37. John Macbeth, Alsager, a boy.
38. Frank Brereton, a boy.
39. David Rigby, Talke Pits, a boy.
40. James Rigby, Talke, a boy.
41. James Booth, Talke, single, support of widowed mother.
42. Henry Critchley, Talke Pits.
43. William Archer, Harding's Wood.
44. William Frost, Talke Pits.
45. Henry Denby, New Road, a boy.
46. John Billington, Tunnel End.
47. William Robinson, Somerford, single.
48. Joseph Yoxall, Talke, married, and three children.

The remains of the whole of these 48 persons were removed to the Swan Inn and identified, together with some 8 or 10 others disfigured past all recognition. The remainder of the list no doubt contains the names of some of these poor fellows, together with those who were not brought out of the pit until last night.

49. James Bidders.
50. Thomas Griffiths, single.
51. John Grindley, single.
52. William Booth, single.
53. Walter Fletcher, a boy.
54. John Yoxall.
55. Daniel Johnson.
56. James Finney, married, and two children.
57. John Vernon.
58. Thomas Beresford.
59. George Kent.
60. Michael Fletcher.
61. Ralph Henshall.
62. Joseph Browning.
63. Thomas Blackhurst.
64. Thomas Daniells.
65. Edward Clewes.
66. Peter Twist, single.
67. George Boughey.

68. William Trot.
69. John Beddow, single.
70. George Wm. Evans, married, two children.
71. Samuel Harrison, widower, two children.
72. William Robinson, single.
73. Daniel Ball, four children, supported his mother.
74. William Washington, single.
75. Ralph Cartwright, married, three children.
76. James Oldfield, single.
77. William Stanley, married, one child.
78. Noah Billington, married, two children.

Opening of the Inquest.

At two o'clock yesterday afternoon, Mr. Harding, who was accompanied by Mr. Booth, his deputy, opened the inquest at the Swan Inn. Mr. Wynne, Mr. Smith Child, the Rev. F. Wade, and Chief Superintendent Sweeting were also present. The house and the thoroughfare leading to it were densely thronged throughout the day, but good order was maintained. The following gentlemen were sworn on the jury :—The Rev. M. W. M'Hutchin, foreman; and Messrs. Jas. Dickson, Clayton; Thomas Emberton, Tunstall; Henry Gillard, Tunstall; John Betley, Audley; Richard Read, Talke Pits; Daniel Johnson, New Road; John Turnock, Talke Pits; John Daniels, Red Street; Thomas Sherman, Butt Lane; Henshall Moss, Red Street; Ralph Hilditch, Kidsgrove; George Shenton, Alsager; Elijah Corbett, Talke.

The Coroner, in opening the inquiry, said the jury had been summoned to investigate the cause of an accident more distressing in its results than any which had ever before happened in the whole of his thirty-seven years' experience as coroner for the district. He proposed to do no more on that day than take some evidence of the fact of the explosion, and of its having led to the death of many persons, with such additional evidence as to identification as would enable him to issue his warrant for the burial of the bodies already brought to the surface. He should then adjourn the inquest for a short time, because in the then state of affairs it would be useless to attempt to go into particulars. The following evidence was taken :—

Isaac Boulton, collier, said,—I live in New Street, Talke, and work at the North Staffordshire Coal and Iron Company's pits. I knew Nicholas Fletcher, who was the head doggy in the pit. I saw him in the pit yesterday morning, about half-past five o'clock. I was working in the pit. The work went on in the usual way until about eleven o'clock. I do not know where Fletcher was at the time. There was a strong rushing wind in the 7 foot, and I and the men working with me made our escape. I came upon one man, whom I assisted to walk a little way, and then I was obliged to leave him at the top of the main dip. I waited for the cage for some time, and then I was raised out of the pit. I saw a man and two boys in the pit, who were dead. I have worked at the pit nearly two years. I know that many men and boys have been killed, and I am satisfied that the explosion, of which I have spoken, was the cause of their death.

Wm. Salmon, banksman of Talke Pits, said,—I let Fletcher and most of the other men down the pit about 5.30 in the morning. At a quarter past eleven I heard an explosion of gas. The explosion blew me against the head stakes. I saw four dead bodies brought up. I saw seven or eight cagefulls of men sent down the pits. Many more were sent down. There were about 180 men and boys in the pit.

Police constable Beckett said,—I am stationed at Kidsgrove, and was formerly stationed at Talke. There are 58 dead bodies now lying in this house. (The officer identified a large number of persons with a view of enabling the coroner to issue burial warrants.) The company has given orders for coffins to be made for every one of the deceased persons.

Mr. John Shenton, the village schoolmaster and one of the jury, Mr. Thomas Sherman, Butt Lane, another of the jurymen, and Mr. Thomas Fryer, builder, gave similar evidence.

The inquest was then adjourned until 11 o'clock to-day (Saturday).

In the early part of the present week, the workmen engaged at the scene of the colliery fatality at Talke succeeded in emptying the sump, which, together with the workings, was diligently searched. No more corpses were however discovered, and therefore the total number of lives sacrificed may be set down at 91. Eighty-nine persons were brought out of the pit dead, and two who were sent up alive lingered a short time, and then succumbed to the injuries they had received. We believe Mr. Wynne, the Government Inspector, has almost, if not entirely, completed his examination of the pit, but several circumstances have led to the decision that it is not desirable to resume the inquest until Tuesday the 8th of January.

The Adjourned Inquest.

The inquiry into the cause of the colliery explosion at Talke, on Thursday the 13th ult., by which 91 persons lost their lives, was resumed on Tuesday morning last, before Mr. W. Harding, Coroner, and Mr. Booth, Deputy Coroner. The jury, of which the Rev. M. W. M'Hutchin was the foreman, met at the Swan Inn, Talke. Mr. T. Wynne, Government Inspector of Mines for North Staffordshire, and Mr. Evans, who holds a similar office for Derbyshire, attended; as did also Mr. Keary, solicitor, Stoke, who watched the proceedings on behalf of the North Staffordshire Coal and Iron Company (Limited), the lessees of the colliery at which the fatality happened. It must be premised that some portions of the evidence would have been quite unintelligible if literally reported, on account of the frequent reference to plans, which our readers, unlike the jury, cannot have placed before them. In all such cases we have endeavoured to give the general drift of the evidence. The roll of the jury having been called,

The Coroner said the country was anxious to know the fullest particulars respecting this melancholy accident, and he was sure the jury would give to the subject their best attention. He was happy to inform them that they would have before them competent and trustworthy men as witnesses, who, while they might not be able to speak positively as to the cause of the accident, would no doubt give evidence which would greatly assist the jury in coming to a decision. He had had some little conference with Mr. Wynne respecting the best order of procedure, and it was proposed to take, in the first place, evidence of the proprietorship and management of the colliery, and then endeavour to discover what actually happened on the morning of the explosion. He hoped the jury would rely solely on the testimony of the witnesses, and dismiss from their minds all rumours and anything which they might have read in the public papers. The Legislature had had under its notice on various occasions the subject of explosions in mines, and it had provided that any person employed in or about a mine, and guilty of neglecting to take ordinary and reasonable precautions, whereby lives were lost, should be held guilty of manslaughter. The Courts of Law had held that a person acting to the best of his judgment and ability in the discharge of his duty was not to be held responsible for an error in judgment, but only for gross neglect and inattention. He mentioned these facts, not because they necessarily bore upon the present inquiry, but in order to show that the Legislature and the Courts of Law had considered the subject. It was very gratifying to the public to know that when such calamities as this happened there were heroic men ready to risk their lives in order, if possible, to save those of their fellow-creatures; and it was also a very pleasing fact that the public themselves had in so liberal a spirit addressed themselves to the task of relieving the sufferings and sorrows of those who had been bereaved by the calamity. The Coroner having handed to Mr. M'Hutchin an anonymous donation of 5*l.* from a lady at Macclesfield,

Mr. George Johnson, the company's general manager, was called and examined. He said—I have been general manager at the colliery in question for ten years. Thomas Nicholls has had the management of the underground department for seven or eight years. He was on the works at the time of the explosion. There were two firemen on that turn—James Sharples and Samuel Kenyon. James Bossons and George Hicks were the night firemen that week. Hicks had taken Sharples's turn on that day, the latter having hurt his shoulder. I heard the explosion as I was coming down the steps of my own house. I went to the works directly, seeing the smoke coming up the pit. The noise did not particularly attract my attention. Nicholls was the first person I met on the pit bank. No mischief was done to the machinery, and under the hour persons descended. Nicholls went down first, and I think he went alone. (Plan of the workings produced.) The colouring on this plan is made up to the end of September. The plan was made by Mr. Cope, surveyor to the company.

By Mr. Wynne.—Nicholls took the responsibility of the underground workings, unless any considerable expense had to be incurred, and then he consulted me. If anything were done in the pit which ought not to be done he would be responsible. Supposing it were necessary to have a second pit down to the bottom, the directors would look to me to see that that was done, and so far I should be responsible. As general manager I should have to see that Nicholls did it. Nicholls would use his own judgment as to the driving of levels. As far as the general management is concerned I am not held responsible for what is done in the pit beyond the sinking of the shafts.

By the Foreman.—Nicholls was not in the Banbury seam that morning because he visited the several workings on successive days.

By Mr. Wynne.—I do not keep a register of the state of the pit, nor are any reports brought to me in writing. I have had reports as to the quantity of air passing into the pit, but not very often with respect to the Banbury workings, because they are new. I have not had reports every morning. The last report before the accident was made by Nicholls on the evening of Tuesday the 11th of December. He reported verbally that he had been in the workings and had found them all right.

By a Juror.—We have a scientific apparatus to indicate the state of the air, and do not trust entirely to our own judgment. As a rule it was under Nicholls's management.

Thomas Nicholls said—I have been underground manager at this colliery seven or eight years. I have to see that all is right in the workings, and that the rules are properly attended to. I was last in the works, before the explosion, on the Tuesday afternoon, and in that part where I believe the explosion took place. I saw nothing at all wrong in that place, but all was clear. If the fireman finds anything wrong when he examines the pit in the morning the overman sends me a note up. No note was sent up on the morning of the explosion. I got to the pit that morning at about six o'clock. I believe the workings were examined that morning by Samuel Kenyon. He is dead. Had he failed to do so it would have been the duty of Nicholas Fletcher, the overman in the pit, to report him for a breach of the 20th rule. The colliers themselves would expose neglect of this kind. I have never received a report that any fireman had failed to perform this duty. Shortly before the explosion I was going down with Wilkinson and Billington, but was called off for a moment. They went down, the explosion took place, and they were killed. As soon after the explosion as possible I made arrangements for the men to come up the other shaft, and then prepared to descend the shaft up which the smoke caused by the explosion had been driven. I shouted down and was answered, upon which I went down the shaft. That was certainly under an hour. When I got to the bottom I found a number of living men there, and I sent them up as fast as I could. I think there were four or five cage loads, and there might have been 20 or 30 men. The men were not permitted to use naked candles, but safety lamps were provided. James Oldfield was the lamp-man that morning, and it was his duty to see that the lamps were locked before he gave them to the men. They were locked by a direct screw. When the colliers finish work they deliver their lamps up at the lamp office on the pit bank. Each lamp is numbered, and every one has his own number. Gunpowder was used for blasting in the workings in which the explosion took place. It was the duty of the firemen to see that the blasting was properly carried on. Gunpowder is used every day and every night as occasion requires. I do not think that blasting had anything to do with the explosion, for no shots had been fired recently, nor were any ready to be fired. I am not aware of smoking having been practised in the pit. I have never received a report to that effect. I have never smelt smoke in the pit. There is a rule prohibiting smoking.

By Mr. Wynne.—The down-cast shaft is 11 feet in diameter, and the up-cast shaft is the same size. The first working you come to, at a depth of 160 yards, is the Ten-foot, where about 20 men were employed. The in-take there was 5 feet 6 inches by 7 feet. In November last I measured the quantity of air going in there, and found it 18,000 cubic feet per minute. The Truro are the next workings, and they are 200 yards deep. The in-take there is 5 feet square, and the quantity of air going in was 9,000 cubic feet per minute. Fourteen or fifteen men were employed there. No complaint has ever reached me of the men being short of air in the Truro workings. Five hundred yards was the greatest length of these workings. There was a furnace to each of these workings. The opening into the Seven-foot, where the explosion took place, was 6 feet by 6 feet 6 inches, and the depth was nearly 300 yards. In the up-cast shaft the opening into the Ten-foot was 10 feet by about 5 feet 6 inches, and into the Truro 10 feet by 8 feet. There was an opening into the up-cast shaft from the Seven-foot. There was an opening at the mouthing from the Seven-foot into the up-cast shaft at the time of the explosion.

Mr. Wynne.—Taking the main level was there an opening into the up-cast shaft?

Witness.—No, but there was a travelling-road leading from pit to pit.

Mr. Wynne.—Was there an opening into the up-cast shaft?

Witness.—Yes, but it was fastened up with two doors.

To a Juror.—They were fastened up in order that the air might go where we wanted it to go.

Mr. Wynne.—Under whose directions was it that the pit was left at the Seven-foot level instead of being sunk to the bottom?

Witness.—I suppose it was a joint direction.

Mr. Wynne.—But who is responsible for it?

Witness.—I do not know how that would be. We considered there was no need to sink it.

Mr. Wynne.—But who is responsible for its not being sunk?

Witness.—I suppose I am responsible to a certain extent. Between the main level and the high part of the workings of the Seven-foot some eight or nine places were bratticed. Some time ago there was water in the jig below, and it was got out on the 11th of August last. We then found that the front jig was not in a very bad state, and we cleansed it out and used it for sending coal down. The back-brow was, however, swollen up badly with the water, and a man could only just crawl over it. We did not cleanse that. I believe Fletcher went through about two months ago, and certainly within three months.

Mr. Wynne.—Knowing that, who is responsible for driving the bottom levels?

Witness.—I suppose I am.

Mr. Wynne.—Then you did not consult Mr. Johnson about it?

Witness.—I told him what we were doing. I generally tell him about those things.

Mr. Wynne.—I want to know whether you hold yourself or Mr. Johnson responsible for continuing those levels after you knew that the air-road was stopped up?

Witness.—I suppose I am responsible.

Mr. Wynne.—After that what means did you take to ventilate the far end?

Witness.—I had plenty of wind coming down, so I placed a door here (*pointing to the plan*) to assist the ventilation. That was on the main jig.

Mr. Wynne.—You considered the putting a door there was sufficient?

Witness.—Yes.

Mr. Wynne.—What was the length of the jig?

Witness.—About 23 yards.

Mr. Wynne.—Tell us what quantity of coal you sent down that jig in 12 hours?

Witness.—Something like 150 or 200 tons. Seven tubs were sent down each time, and seven brought back. I have made no calculation of the length of time the door would be kept open while these tubs were passing through. It would only be for a second or so, on account of the great speed at which the tubs travelled. In addition to this another door was put up. I opened the Seven-foot up towards the east on my own responsibility. I did not find an extra quantity of gas there. At one time the air would be 100 yards higher than its outlet, and would require pulling down that distance. The state of the lower level was good on the Tuesday before the explosion. There was no gas at all there. My orders were that men were not to work where there was gas. Only on one or two occasions have I received complaints of the presence of gas in the workings. There was once a little gas in the bottom level, but work was stopped, and it was cleared away in about twenty minutes. That was some time ago, and the place has been right ever since. The gas was caused by the drop sheet being down, and the fireman put it up again. I went into the mine two or three times every week.

Mr. Wynne.—Now, Nicholls, you can please yourself whether you answer this question or not. Did you not know there was smoking constantly going on in the pit?

Witness.—I did not.

Mr. Wynne.—Did you not know that the men had false keys to their lamps?

Witness.—I did not.

Mr. Wynne.—Was that circumstance never reported to you?

Witness.—It never was reported to me.

Mr. Wynne.—Do you know whether they had or had not?

Witness.—I have heard so since the explosion.

Police constable Beckett here produced a bunch of 23 lamp-keys of various kinds, and some of a very rude description. They were all found upon men who were killed. In one case two nails were fastened together; but there were two or three which looked like regular lamp keys made for two different descriptions of locks.

Mr. Wynne to witness.—How do you account for that number of keys being found upon the men, and yet you say it never came to your knowledge that they had any?

Witness.—They would be concealed from me. I never knew that they had any at all.

The Coroner to Beckett.—Can you identify any key as having been found upon any particular person?

Beckett.—Yes. This (*taking up a key*) I found in the pocket of Thomas Berisford.

A Juror.—I can furnish the names of the owners of a number of the keys, if necessary.

Mr. Wynne.—Now as to the firing of shots?

A Juror.—But we have not yet done with the keys.

Chief-Superintendent Sweeting.—Is the lamp-lock an ordinary one, because if so it is a bad one?

The Coroner directed a lamp to be sent for, and upon its being produced it was found that it might be opened very easily.

The Coroner to Beckett.—Have you inquired who made these keys?

Mr. Evans.—They may be bought at any ironmonger's shop.

The Witness by a Juror.—The firemen and the overmen were the only persons allowed to have lamp keys in the pit. Berisford had no right with a key. The firemen had keys, because it was their duty to relight the lamps if they went out.

By Mr. Wynne.—The firemen were the only persons authorized to fire shots, and they did so after ascertaining that all was right. Fletcher, the overman, was also authorized to fire shots in going his rounds. It has never come to my knowledge that other men have fired shots. The firemen would sometimes find two or three shots close together, and then, when he had seen that all was right, he would sometimes let the men apply the touchpaper. Beyond that it had never come to my knowledge that the men fired their own shots. The men have sometimes grumbled because they have had to wait for the firemen. No man has ever complained that he had had to wait an hour. I always told them they must wait for the firemen. I have not received more than two or three complaints from men who had had to wait. I have not had more than a dozen complaints.

Mr. Wynne.—Supposing that, as we saw, five or six places were being drilled at the same time, would those two firemen be the only two persons to fire shots at the top and bottom of a long level.

Witness.—Fletcher would assist them in going his rounds. The firemen would examine them, and let the men fire them one after another. I never heard the men grumble that there were not enough men to fire the shots. The shots were fired either with touch-paper, or by means of a thin wire made red hot in the lamp flame. I knew that this was done. To my knowledge the lamp tops were never taken off for that purpose. Sometimes straws and sometimes fuses were used. I have not found any of the men with pipes. The lamps were generally taken into the levels to be re-lighted. The last time I gauged the seven-foot before the explosion I found 24,000 cubic feet of air passing in every minute. At all times there are upwards of 40,000 feet of air per minute going out of the top of the pit.

By the Jury.—I cannot tell exactly what was the cause of the explosion. It seems to me that some one had the top of his lamp off, or struck a match. I cannot say what was the cause of the sulphur being there.

Mr. Wynne.—If the place had been ventilated the sulphur would not have been there?

Witness.—No; but we had been occasionally plagued by blowers of gas coming out of the coal suddenly. They will fill up a long way back, but we can get clear of them in a few hours or a day at most.

Mr. Wynne.—I thought you made a report on the Tuesday that the place was not foul?

Witness.—Only when a blower takes place.

Mr. Wynne.—You did not say so before?

Witness.—We have not had a blower lately.

Mr. Wynne.—Can you fix the time of the last?

Witness.—We had a very large one here (*pointing to the map*) a fortnight back, but we had wind enough to take it away.

By a Juror.—A pipe and a match were found in the pit after the explosion.

By Mr. Keary.—There is always a man in the lamp office to lock the lamps and to give them out, and there is a man at the bottom of the shaft who examines the lamps again before the men go into the workings. My orders were that no man was to pass whose lamp was not locked. It is the duty of the firemen to examine the workings morning and night before the men go to work. It was their duty to report to Fletcher if they found anything wrong, and Fletcher's to report to me. The place where I believe the explosion took place was where the pipe was found. The coal was most "frizzled" there. A sudden blower coming in contact with a light would explode, whatever the state of the ventilation. I never heard any complaints of the state of the ventilation.

Charles Lawton, deputy under-looker, deposed—I worked up to about four o'clock on the morning of the explosion, but I saw no indication of gas. John Henshall complained to me that there was gas about seven o'clock on Wednesday evening, and I told him and others to go to work in the new seven-foot. The gas was reported to James Bossons, the fireman, who afterwards told me that he had put all right. In my opinion the works were safe when I left them that morning. Men were not in the habit of smoking in my presence. I have reason to believe they did smoke—a good many of them. I never saw men smoking in the workings.

By a Juror.—The men knew when I was coming, and then they put out their pipes. I have smelt tobacco. I never took any particular means to discover who had been smoking. It was not my business to do so.

Mr. Wynne.—Do you mean to tell the jury that you did not think smoking dangerous?

Witness.—I did not think it extremely dangerous to smoke.

Mr. Wynne.—Did you not consider it dangerous there should be smoking?

Witness.—In some parts of the pit I did.

To a Juror.—I may have smelt tobacco, but I cannot name any particular time.

By Mr. Wynne.—I knew that the men had keys of their own, and I had reason to believe that they unlocked their lamps. I did not find them unlocked. I occasionally tried the lamps, but I never found any unlocked—never. I did think it extraordinary in one sense and not in another, when I heard that some of the lamps had been found unlocked. The men could lock their lamps when they heard me coming. If I saw a man hurrying towards a lamp I might suspect that it was unlocked. I might have re-lighted some lamps that night. During the whole of the night I heard no complaint of the state of the pit beyond what I have mentioned.

By Mr. Keary.—I found a pipe against the top brow, but I do not remember any lamp being near it, but there were some matches. I and Nicholls found a lamp (No. 86.) with the top off. It was at the extreme end of the level. The lamp bottom was in the cut and the top against the rib. The top and bottom were six or seven yards apart. That was the place where Young and Lismore worked.

Mr. Wynne.—It will be found that this lamp belonged to Joseph Lismore.

By Mr. Keary.—I never saw any one smoke beyond the bottom of the shaft. I never received information that people had been smoking. I might have smelt tobacco. I have thought so. There have been occasions on which I might have smelt tobacco smoke, but I might have been deceived. I do not think I ever told anybody of my suspicions. I never saw a man with his lamp-top off in that pit. I have never heard of a man opening his lamp with a nail, nor sucking the flame through the gauze of his lamp.

John Henshall said—I was working in the pit the night before the accident at the far end of the lower level. When I went in there was plenty of good air in my place, and that continued until half past six in the evening, when being ready to fire a shot I sent for Bossons, the fireman, and by his orders I left off working there. A drop sheet had fallen down, and that led a little gas to accumulate. Bossons replaced the sheet, and restored the ventilation. I have never heard any complaints of want of ventilation nor of gas being in the pit. I never saw gas before this night, unless it might be a bit of a blower. I never carried a lamp key. I have made complaints of the firemen not coming to fire the shots, but I have never had to wait long. I have never threatened to fire shots myself if they did not come.

By the Jury.—I never saw a key in the possession of a collier. I never smoked in the pit myself. I chew in the pit and smoke at home. I never saw any one smoke in the pit.

Joseph Lovatt, collier, said—I worked in the pit up to two o'clock on Wednesday morning. I had no lamp key. If my lamp went out the fireman relighted it for me. I have seen men smoke in the pit, but I have never reported them. I have seen men open their lamps with false keys, but I never told any one.

Mr. Wynne.—None of the living men have false keys, Lovatt?

Witness (innocently).—No, sir. (A laugh.) My mate generally fired our shots. Sometimes, if we wanted a shot fired, we fired it, whether the fireman was there or not. I have never heard complaints of delay made in consequence of the fireman not coming to fire the shots.

Mr. Wynne.—Why did you fire the shots yourselves?

Witness.—We were like to fire them when we wanted coal for the loaders.

Mr. Wynne.—Whether the fireman came or not?

Witness.—Yes.

Mr. Wynne.—Did you make inquiries for the fireman?

Witness.—We have done, but not regularly.

The Foreman.—Was that against the rule of the colliery?

Witness.—Yes.

Mr. Wynne.—How did you get a light?

Witness.—I don't know. I always went away. My mate can tell all about that. The fireman was not angry with us for firing our own shots.

John Steele deposed—I fired two shots in the night before the explosion. I lighted some touchpaper with my lamp. It was not my practice to send for the fireman when I had a lamp with gauze round the flame, but when I had a lamp with glass round the flame I was obliged to do so. I had not a false key. I never smoked in the workings, nor saw anybody else smoke there.

Joseph Bossons, fireman, said—The night before the explosion I examined the workings. There was a little gas where Henshall worked. The gas was about a foot down. It was caused by a sheet having fallen. I replaced the sheet, and so cleared the gas away. No one worked again in that place during that night. A few shots were fired. I did not know of men having false keys, nor have I ever known smoking in the pit. I left the pit all right between two and three o'clock in the morning. I cannot recollect smelling tobacco in the workings. I did not know that Proctor and Steele fired shots on Tuesday night. I have often tried the lamps in the workings, and have never found one unlocked. The men have complained of having to wait for some one to fire their shots.

Daniel Heath, collier, said—My place was clear of gas during the whole of Wednesday night. Bossons tried my lamp and those of the men I was working with. I fired four shots on Wednesday night. The fireman was not there, but he knew that we fired them, because we could not have got coal if we had not done so. We lighted touchpaper with the flame of the lamp. I never saw any one smoke in the pit. I never knew a lamp to be unlocked excepting by the fireman.

At this stage of the inquiry the proceedings were adjourned until the following day.

Fifth Day.

The jury re-assembled at 11 o'clock on Wednesday. Before the examination of witnesses was commenced,

Mr. Wynne requested permission to say, that at a meeting of miners' delegates held on Monday at Motherwell, near Glasgow, Mr. M'Donald, secretary to the miners of Scotland, was reported to have said, "We have made a searching inquiry, so far as our "means could go, and it cost us heavy expense, into the Harecastle explosion, and we "find that for months and months that pit had been recognized as in a state ready to "explode at any hour." He could not state it too publicly that if such an inquiry had been made those who had given information were bound to come forward and lay that information before the jury. (Hear, hear.) He had no means of laying this evidence before the jury, but it was the bounden duty of those who were enabled to do so not to withhold this evidence. It was either false or true; if it was true the jury ought to know all about it.

Mr. Dickson and one or two other jurymen said they believed the statement was a deliberate falsehood. Mr. Dickson thought some one should be appointed to write a letter to Mr. M'Donald, calling upon him to substantiate his statement.

Mr. Wynne remarked that the information referred to might yet be brought before the jury.

The Coroner thought they ought to be much obliged to Mr. Wynne for bringing the subject forward, but he did not think they could do anything in it at present. If necessary, they could take notice of the statement at the close of the inquest.

James Anderson, collier, was then examined. He said—I had been working all Wednesday night in the lower level, and found no gas; nor did I hear any complaints of gas. At half past 5 o'clock in the morning, while I was talking to Fletcher, Kenyon came up and said he had been through the workings and found them safe. I never saw any one smoking in this part of the pit. Some of the men had lamp keys. I never had a false key, or smoked in the pit.

Thomas Turnock deposed—I went to work at five o'clock on the morning of the explosion, in the middle level. Kenyon tried my lamp and also my working place. It was free from gas. I worked until the explosion, the effect of which was very slight upon me. I concur in an opinion expressed by Mr. Wynne in the pit, that the explosion took place in the lower levels.

By Mr. Wynne.—The level I was in was bratticed, and there was very good ventilation. About a month before the explosion we had a little gas one morning, but we mentioned it to the overlooker, and he sent the fireman to remove it. On one occasion I had to leave the pit because there was a large blower which filled up the place almost as fast as I could run out. That was about 12 months since. There has been no gas lately that was worth speaking of. It may have come down about a foot, but we have blown it away with a piece of tin. The blower was on the third level above the stable dip. It caused us to cease work in that level a week or more. The fireman always fired my shots. I have seen men smoking in the pit.

Peter Hollier, banksman, said—Kenyon went down the pit about an hour before the rest of the men on the morning of the explosion. None of the men who came up before that time complained of the gas.

William Salmon, another banksman, was also called, but all he said was that the explosion blew him against the head gear, and he was so frightened that he ran home, and did not come near the pit again that week.

John Breeze, collier, said—There was a blower where I was working on the Wednesday night, but the air took the gas away as fast as it came. I fired one shot that night, getting the light from the fireman. It was after the blower had done blowing. The blower lasted about a quarter of an hour. I heard no complaints made that night of gas being in any part of the pit. I was one of the first who went down the pit after the accident. I found Samuel Harrison dead, with a pipe in his hand. I found an unlocked lamp near him. (*The pipe was produced, and found to have been half smoked out.*) I never saw any one smoke in the pit, but I have smelt smoke. I did not know that the men had false keys. I had not one myself.

By the Jury.—Harrison's lamp was not open. I never heard of anybody unfastening a lamp with a pick.

The Deputy Coroner.—Is there any one here who worked in the upper levels?

Mr. Johnson.—No; they were all killed.

James Withenshaw, collier, said—I went to work at half past five on the morning of the explosion. Fletcher and Hicks told me the pit was safe. I never heard any one complain of gas being in the pit. There will often be blowers in a new piece of Banbury. I fired my last shot myself, because Fletcher told me I might. It was only three or four minutes after he had left. I have never had to complain of delay on account of the firemen not coming to fire the shots. There was only one explosion.

Charles Roberts deposed—On the morning of the explosion I was working in the far end of the top level, in the same place as Withenshaw. I examined my place when I got to it, and found it was free from gas. I heard no complaints on Thursday about there being gas in the pit. I had to go a long way, but I saw no gas. After the explosion I put up a sheet to get some air, but none came. After waiting about twenty minutes we made our way to the bottom of the shaft. We trod upon some bodies, but although we had lights we could not see them on account of the smoke. We expected every minute would be our last, for we were losing the use of our legs and arms. I have sometimes met with blowers, but the last was a good while before the explosion. I never had a false key, nor did I smoke in the mine. I have never seen men smoke in the mine.

Daniel Cope, collier, was called to prove that on the Wednesday night there was no gas in the upper level.

By Mr. Wynne.—James Bossons fired some shots that night for David Heath. I fetched him at Heath's request.

Alfred Dale, who was still suffering from the effects of the accident, and was therefore accommodated with a seat, said—I worked at the bottom of the stable dip. There was no gas there, nor did I hear any complaints of gas. After the explosion the flame rushed past me. I made my way to the upcast shaft, and called out for a rope, but they told me to go down to the Banbury, and I did so.

Moses Taylor, collier, deposed—I was working in the seven-foot on the morning of the explosion. It had been tested by Kenyon, who said it was all right. I tried my place when I got there, and found it free from gas. About an hour and a half before the explosion we had a blower, and I sent for the fireman, who put up a length of bratticing to clear it off. It succeeded, but there was a little gas left when the explosion happened. We very seldom made blowers.

By Mr. Wynne.—The gas fired in our lamps. I was taken out of the pit insensible.

Richard Elliot proved there was no gas in the new seven-foot on the morning of the explosion, and that there was a good supply of air. He was taken out of the pit in an unconscious state.

Henry Randles said--I worked in the extreme north end at the pit. Hicks tried my lamp. He also examined my place, and said it was right. I have not met with a blower during the two years I have worked in the pit. The fireman fired my shots and re-lighted my lamp at the bottom of the shaft.

A Juryman.—Do you mean to say that if your lamp went out you took it to the bottom of the shaft to have it re-lighted, a distance of half a mile?

Witness.—Yes.

The Juryman.—Then you are a good chap.

James Oldfield, lamp cleaner, deposed—I had charge of the lamps, and gave out all those used by the men. They were always properly locked. Lismore's lamp was No. 86. The lamps were given to me after the explosion. Most of them were locked. I cannot say how many were unlocked. There were some. William Booth's lamp was No. 325. I never had any lamps given to me unlocked after an ordinary day's work. I never knew that the colliers had false keys.

Mr. Wynne.—Do you mean to say you could not tell when the lamps had been tampered with by such rude keys as these?

Witness.—Yes.

Police-constable Beckett said—I found the 27 lamp keys, already produced, in the pockets of some of the dead men. I also found more than a dozen plain and fancy pipes, many more tobacco boxes, and matches in the pockets of most of the men. On the elder Booth I found a lamp key.

The inquest was then adjourned until Tuesday next, when the scientific evidence will be taken.

Sixth Day.

The jury empannelled to inquire into the cause of the disastrous colliery explosion at Talke re-assembled at the Swan Inn in that village on Tuesday morning last, before Mr. W. Harding, Coroner, and Mr. J. Booth, Deputy Coroner. Mr. Wynne and Mr. Evans, Government Inspectors of mines; Mr. Keary, solicitor, who watched the proceedings on behalf of the lessees of the colliery; Mr. Addie, Mr. Johnson, Mr. Strick, Mr. R. H. Wynne, Mr. Coe, and other gentlemen, were also present. It may be remembered that at the last meeting of the jury Mr. Wynne produced a copy of the *Glasgow Herald*, containing a report of a speech by Mr. Macdonald before a meeting of miners' delegates, in which he stated that the miners' union had, at a great expense, caused an inquiry to be made into the explosion at Talke, and had discovered that for a long time past the pit had been in such a fearful state that an explosion might have been expected at any hour. Several of the jury thought this allegation had not been borne out by the evidence, and they expressed a desire that the information in the possession of Mr. Macdonald should be laid before them. The Coroner intimated that it should be procured, if possible; and some further conversation took place which was duly reported. A copy of the report of the meeting having been sent to Mr. Macdonald, he addressed a note to Mr. Wynne, which the Coroner now read. It was as follows:—

"I see from a paper sent me that you did me the honour of making my statement regarding the Harecastle (Talke) explosion known to the jury. Notwithstanding the vulgar haste, if it be rightly reported, of one of the jury, I beg again to affirm, on information I have, that the mine was in a fearful state for months. I can send you a copy of my information, if you desire it. I only regret I cannot find time to come to the place, as my information leads me to believe that the men are afraid to speak out as they ought. Yours, &c.—P.S. Should the jury be all of the stamp of the one that roared out when you mentioned my statement, their verdict is known already."

Mr. Keary said the owners of the colliery had no wish that any information should be suppressed, and if it was the wish of the jury, he should prefer that the inquiry should be adjourned again rather than that there should be any suspicion of suppression of evidence.

Mr. James Dickson assumed that the allusion in the letter was to himself, as he had had several letters and remarks addressed to him about it. What he had said at the inquest was that he believed the statement to be an untruth, and that, so far, they had had no evidence in support of it. A great deal had been said out of doors, however, and he had been told that the jury had not made the proper inquiry that they should have made. He had been told that he was connected with mines, which he did not deny. Mr. M'Hutchin, the foreman of the jury, was friendly with the foreman too, and to a certain extent many of the jury were connected with mines. This statement he made in the hope that parties who had any information to give would do so. All, Mr. Johnson included, were anxious for a strict inquiry, and he, for his part, should do that duty he was sworn to do, whether he found it to be part of that duty to condemn Mr. Johnson or anybody else. There were, he understood, many parties out of doors who had stated that the pit had not been fit to work in for weeks and weeks, but the duty of himself and brother jurors was, he took it, to be guided by the evidence produced before them, and for his part he should be so guided. If there were parties who could give information, he hoped they would be called; and if none were known of, it would be better to give them an opportunity, by adjournment, to come forward, rather than the jury, Coroner, or Inspector should remain under censure.

Mr. Shenton expressed his confidence in the Coroner, Mr. Wynne, and Mr. Johnson, adding, that so far there was no case in support of the statement made at Glasgow.

Mr. Wynne observed that he did not suppose Mr. Macdonald meant his letter to be considered in the light of a private communication.

Mr. Emberton, a juryman, thought the jury had nothing to do with Mr. Macdonald. He should do his duty fearless of the Coroner, the Government Inspector, the foreman, or anybody else.

The foreman recommended that Mr. Macdonald's statement should be thoroughly sifted.

Mr. Keary suggested that Mr. Macdonald should be asked to give the names of the persons who had supplied him with information, in order that they might be called as witnesses.

After some further conversation,

Daniel Brownsword, a collier, was called. He said he went to work at about five o'clock on the morning of the explosion. Samuel Kenyon tried his lamp at the bottom of the shaft. Hicks was the fireman that turn. He was going his round, and had not returned. He (witness) went into his place, and found a small quantity of gas before he thirled, but not enough to be dangerous. It went away when he had thirled through. At half past ten he left the pit because he had to go on a journey. There was no gas there then. There was more or less of gas in the pit, but he never saw enough to make it dangerous. He never had to leave his working place on account of gas. He remembered a man named Draycott trying to fire a shot himself, and he was stopped by the underlooker. He had worked in the pit four or five months, and never yet saw it in a dangerous state. He had sometimes met with small blowers, but had brushed them out in a few minutes. He fired his own shots, whether the fireman was there or not. It was the rule in the pit. It was the practice to fire with touch-paper lighted at the lamp. He never saw a man smoke or unlock his own lamp in the pit. When his lamp went out he had to take it to the fireman. The gas sometimes fired in the lamps. If there was not much gas the men did not complain to the fireman. The fireman always took the lamps into the fresh air to re-light them. There were places which gave off a good deal of gas, but as an old collier he had never had any difficulty in clearing it away.

Francis Seabridge, collier, went to work at six on the morning of the explosion. Kenyon tried his lamp. He worked in the main landing of the Seven-foot. About eleven o'clock he saw like a big ball of red-hot iron coming up the jig. He threw himself down, and it passed over him, and he was burnt. He was obliged to remain until some one came to put him in the cage. The waggons went off the rails, at the door, for about twenty minutes before the explosion took place. They often went off the rails, but not at the same place. Thirteen or fourteen trains of six tubs each went through the door every hour. The journey lasted about a minute. There was a boy whose duty it was to do nothing besides open and shut the door in the jig.

Thomas Froggatt, collier, saw no gas in the pit the night before the explosion. He had never had occasion to stop working on account of the gas, nor had he heard complaints of gas. He had fired shots when the fireman had not been there.

Joseph Johnson, collier, saw no gas in the pit previous to the explosion. He had worked in the bottom levels, but had never seen any gas there. He had once left off work on account of gas. When he found a little gas in his place the fireman used to allow him to brush it out. He had fired shots without calling in the fireman.

John Condliff, one of the men who came out of the pit alive, badly burnt, was unable to attend the inquest. The foreman of the jury and the Deputy Coroner attended at the man's house to take his deposition. He said: On the morning of the explosion I was working at the top of the main dip. I went down at half past five o'clock, and worked until the explosion took place. Shortly after eleven o'clock I felt a wind, and then the fire came. We had a train of waggons off the line in the jig in the doorplace. The door could not be shut, and then the air commenced to go wrong. There were a lot of men, amongst whom were Edward Dutton, Samuel Kenyon, and Edward Duffy, who were trying to clear the line. The train was off about ten minutes. We went down to the train, and they sent me to fasten the jig, and then I sat down with Seabridge. The pit was all right when I went to work in the morning, and I heard no complaints of gas. I have seen men smoking in the pit; and I have seen both men and boys with keys to unlock their lamps. Most of them used to unlock their lamps to snuff the wicks; but they always kept a look-out when they were doing so. I never knew the place unfit to work in. I have worked there about five months. I sent the empty powder cans out of the pit at ten o'clock that morning. There was very little powder in the pit at the time of the explosion. The fire came up the dip.

The jury then retired a short time for refreshment. On their re-assembling, the Coroner observed that fresh facts arose almost every day, and the greater care they took in that inquiry the better satisfied they would be when their labours were over. As to any reports which might have been circulating respecting that unfortunate occurrence, they must at present leave them entirely out of the question. It was proposed now to go on with the evidence, and then adjourn till the following day; after that it had been suggested that it would be desirable to adjourn for a fortnight, in order to give an opportunity not only to those who were present, but to any others who might wish to give evidence at the last adjournment.

Mr. Coe, manager of the Biddulph Valley Collieries, the property of Mr. Robert Heath, examined by Mr. Keary, said—I have been connected with collieries nearly forty years, and have been a manager 27 or 28 years. I visited the pit in question the morning after the explosion, accompanied by Mr. Wynne and others, and examined a considerable part of the workings. In the lower level we found the coal on fire for a distance of six or nine feet. We put a piece of wet cloth over it, and I and Mr. Wynne stood on it while some of the men brought water to put it out. In the up-brow there were strong marks of an explosion. The dirt was charred, and everything seemed to be calcined. If the explosion took place there, as I believe it did, it divided itself into two, and proceeded in two directions. About seven or eight yards from where I suppose the explosion originated, we found a pipe and matches. From what I subsequently heard, my impression has been strengthened that that was where the explosion occurred. On the Monday morning after the explosion, I, Mr. Wynne, Mr. Johnson, Mr. Nicholls, and others went down again, and examined the whole of the workings, and we found a little gas in the rise where the ventilation could not get to it. With that and another slight exception we could not find any gas in the pit. There is no doubt that the coal let off a good deal of gas. I tested the ventilation on the 31st, and found the pit perfectly clear, and the ventilation completely restored. 33,000 cubic feet of air per minute was going into the mine. At the place where I believe the explosion occurred I found 1,207 feet entering per minute, which was quite sufficient to ventilate the up-brow. I have no doubt it was better to drive the up-brow than clear out the back brow where it was injured by water. I think Nicholls acted wisely in driving that brow rather than clear out the other. There is always risk in driving up-hill in a fiery mine, but at the same time I think Nicholls took sufficient precaution in requiring the men to use safety lamps. If the men had kept the tops on their lamps, had not smoked, nor struck matches, I think that the pit would have been perfectly safe. No shot was fired in the up-brow immediately before the explosion, because a man's pick was lying there just as he had used it. I agree with Nicholls that it was better to connect the pit with the new Seven-foot than sink to the Eight-foot. Taking everything into consideration, I think the works were well and skilfully laid out, and no fault can be found with them, nor with the manner in which the pit was conducted. I think proper precautions were taken to prevent accidents, and that a great deal of credit is due to Mr. Johnson and to Nicholls. (The jury expressed their approval of this sentiment by stamping on the floor.) I have seen the lamps. They are of two kinds. The common Davy with gauze round the light, and the Clanny, which has a cylinder of glass round the light. I do not approve of the Clanny lamp being used in dangerous places, and I was very glad to see on going into the pit with Nicholls after the explosion that he would not allow the men to go into dangerous places with the Clanny lamp. The reason is that the glass is liable to be broken. I examined the lamps generally, and I never saw a better set in my life. I never saw a lamp yet which could not be unlocked, and it is no matter what kind of lamp you invent as long as the men strike matches in the pit. If that practice could be stopped there would be some gain in having a lamp which could not be opened. If a man wants to light his pipe or fire a shot, he will strike a match if he has one, and in all probability he would do that if the pit were as full of gas as it would hold. The blowers spoken of proceed mostly from what are called jumps or small dislocations of the strata.

By Mr. Evans.—As a principle it was not a good thing to have to bring the air down a distance of 200 yards to the outlet. I do not think there is anything to show a want of skill in taking the air from the rise workings to the deep levels. I did not measure the quantity of air at the rise workings. The quantity of air at the return was 25,000 cubic feet per minute. I believe the whole of that quantity went up the rise workings. It was a very wrong and foolish thing for the firemen to allow the men to go into their places when there was gas there and to brush it out themselves. As a principle that was wrong, and was not skilful management. I would not let men go to work where there was gas. It was not right for the firemen to relight the lamps in the return air. If I had a lamp to light in the return air I should first of all ascertain whether it was dangerous or not, but no doubt it is wrong in principle to relight them there at all.

Mr. Evans.—Do you think that powder ought to be used indiscriminately in a fiery mine where gas is constantly being given off?

Witness.—That question involves a great deal. It is a matter of pounds, shillings, and pence. I take it the object of this inquiry is to find out the cause of the death of these men, and I believe it is admitted that the firing of a shot was not the cause of the explosion. Putting that on one side, I hold the opinion that in all fiery pits, giving off gas in considerable quantities, the use of gunpowder ought to be prohibited entirely and for ever. ("Hear, hear," by the jury.)

Mr. Evans.—I am much obliged to you for the answer, but it is only just to say that the practice is very general.

Mr. Coe.—It is the rule. I have fiery pits under my charge, and I use gunpowder simply because I am compelled to do so by the usages of the country.

The Deputy Coroner.—Do you mean that you could not compete with other coal getters if you did not use it?

Mr. Coe.—I mean that if I said we must not use powder the colliery proprietors in this and other counties would put me down for a complete noodle. They would not think me *compos mentis*. On the other hand, the men, if I were to make such a proposition, would look upon me as their greatest enemy. The night before the explosion I know there was gas in the lower levels. I know there was gas frequently there. I think that 25,000 feet was quite enough to ventilate those low levels. There was not enough to clear that part the night before the explosion, because the man Henshall had to leave. That might have arisen from two or three causes. The brattice might have been disarranged, or an extra quantity of gas might have been given off from the face of the working, or some of the doors might have been partially open through neglect, which would be the main cause. I am not aware that gas was constantly being given off in the low levels. Where you are obliged to put doors it is better to have them double. That ought to be the case where the ventilation depends much upon doors. In the part of the country where I gained much of my experience it is only great rushes of gas which will immediately fill a pit that are called blowers. Here they call every little jet a blower. The ordinary ventilation ought to have been sufficient to keep the place clear of small blowers.

Mr. Evans.—But we have evidence that it did not.

Mr. Nicholls was recalled, and examined by Mr. Keary.—He said, I believe it was a quicker operation to drive the up-brow than to clear out the back dip, and that was my reason for taking that course. The reason why I had only one door in the jig was that the distance between the two cross-headings, 25 yards, was so small that on the passing of the waggons they would virtually have been both open at the same time. In no respect was I ever deterred from fear of expense. Expense never was a consideration with the proprietors. In all I did I acted to the best of my judgment and ability. After we got the cross-head in I never heard of a complaint of want of ventilation in the lower levels. In the case of the man Draycott, it was reported to Lawton, the underlooker, that he wanted to fire a shot himself. Lawton went to his place, blew his lamp out, and ordered him out of the pit. When he came to the top I sent him about his business. In another part of the colliery men for removing the tops of their lamps have been taken before the magistrates and fined. That was under different management. It has never come to my knowledge that the offence was committed in this pit. It was entirely contrary to the rules and to my orders.

By Mr. Wynne.—The door in the jig was put in to enable us to get the new air-brow completed. I heard that gas was in the extreme low level. It was caused by one of the sheets being down. I account for the gas being there, notwithstanding the door being on the jig, by an imperfection in the sheet. Another sheet was put up after that was down, but when the door was up there would be no sheet wanted. The ventilation was not materially interfered with by the opening of the door on the main jig.

Mr. Wynne.—Was it not the fact that these new levels were opened without sufficient ventilation, in order that you might get all the coal you could?

Witness.—No; I did it to provide a place to put some roof rubbish in. There were 1,200 feet of air coming into the lower levels every minute. I cannot say whether on the 27th of December there were only 200 feet passing into the lower levels after the ventilation had been restored.

Seventh Day.

Mr. Coe, on being recalled, said, in reply to Mr. Keary—The up-brow would be driven in less than half the time it would take to clear out the back-brow. In his opinion the mode of ventilation was the best and only mode under the circumstances. He should not have hesitated a moment to work the mine with the ventilation provided.

Mr. James Dickson (a juryman).—Mr. Coe, the jury would like you to explain what you mean by "under the circumstances"?

Mr. Coe.—The back-brow being swollen up, it was necessary to bring the air down the jig-brow. Under those circumstances, I say, it was better to bring it down there than down the jig-brow.

Mr. Wynne.—What was the necessity for carrying on these lower levels at all until a proper supply of air had been provided?

Mr. Coe.—That is a question rather for the managers than for me. All I say is I should have had no hesitation in carrying on the mine with the ventilation I found there after the explosion.

Mr. Wynne.—And kill 91 men. Then you would go very near the wind indeed. If those levels had not been driven, would the explosion have happened?

Mr. Coe.—I do not know.

Mr. Wynne.—What caused the explosion?

Mr. Coe.—I believe those lower levels had nothing to do with the explosion.

Mr. Wynne.—Does not the evidence go to show there was gas in the lower levels?

Mr. Coe.—No question.

Mr. Wynne.—And none in the up-brow?

Mr. Coe.—And none in the up-brow.

Mr. Wynne.—And yet the lower levels had nothing to do with the explosion?

Mr. Coe.—I believe the explosion took place in the up-brow.

Mr. Wynne.—Do you mean to tell us these levels had nothing to do with the explosion?

Mr. Coe.—Nothing whatever.

Mr. Wynne.—Very well. Now, did you ever in your life see a pit in which a single door in the jig guarded the whole ventilation?

Mr. Coe.—I never did.

Mr. Wynne.—And do you call that good management?

Mr. Coe.—I never said anything of the kind.

Mr. Wynne.—You are going a little further than you did yesterday?

Mr. Coe.—I said the same last night. I did not defend the use of only one door.

Mr. Wynne.—You said the workings were skilfully carried out?

Mr. Coe.—I said, "under the circumstances."

Mr. Wynne.—Then, I say, under the circumstances, was it right to push on those levels?

Mr. Coe.—If I had had the management I should have pushed them on with the amount of ventilation provided, but I should have had a double door. There is no evidence there was gas in the lower levels at the time of the explosion.

Mr. Gavin Addie said he was a coal and iron master in the immediate neighbourhood, and he had been sixteen or eighteen years engaged in mining operations, and a considerable portion of the time in that district. He went down the pit soon after the explosion, and he described the state of the pit. The explosion, he believed, took place in the extreme end of the up-brow. He visited the pit on the 31st of December, and the ventilation was then very strong and quite sufficient. It was not an unusual extent of working to ventilate with one current of air. It was certainly a better and more skilful course to drive the up-brow than clear out the back dip. The back dip, had it been cleared, would have been unsatisfactory and unsafe. He considered there was ample ventilation for the lower levels.

Mr. Keary.—Have you formed an opinion as to the cause of the explosion?

Mr. Addie.—Well, these deep workings seem to have been giving off gas very heavily as they were proceeding, and if the ventilation was interfered with for any considerable length of time most certainly it would accumulate in the different working places, and the carelessness of the men, of which we have had so much evidence, would be sufficient to account for the explosion. A dangerous quantity of gas would accumulate if the door on the jig were left open from ten to twenty minutes. According to what we have heard, Kenyon, the fireman, and other men, crowded round the waggons when they got off the rails, and that would most likely occupy some minutes; but Kenyon should first of all have taken the men out of the deep levels.

By Mr. Wynne.—It was dangerous to have the door open beyond ten minutes. It is certainly objectionable to have an important door like that on the main jib brow. I have heard that most of the faces gave off a little gas. There was no absolute necessity for driving in those lower levels, but I consider it was perfectly safe to do so, provided the door in the jig was not kept open from ten to fifteen minutes. It is not possible to secure that a door of that description shall always be kept shut, but it may be kept shut sufficient for the purpose of ventilation. The train was as likely to go off the rails in the doorway as at any other point in the jig. If a train went off there, and the door were kept open ten minutes, there would be a dangerous accumulation of gas.

Mr. Wynne.—Then I have nothing more to ask you.

Mr. John Strick, one of the first explorers of the pit after the accident, said he had been for three and a half years mining engineer at Earl Granville's colliery at Hanley. He gave an interesting account of several explorations which he made in company with Mr. Wynne, Mr. Addie, Mr. Coe, and others, and said in his opinion the explosion took place in the up-brow. He believed there had been a good current of air in the pit, and that everything had been in good working order.

Mr. Rigby, the next witness, said he had been a coal proprietor and manager 30 years. He owned pits in the neighbourhood. He was in London at the time of the accident, and did not visit the pit until a fortnight afterwards. He inferred from the appearances that the explosion took place in the up-brow. On the 27th of December he found the ventilation very good. On the 31st he visited the pit again, when everything had been put right, and found the ventilation excellent. He therefore believed the ventilation was good before the accident, and sufficient to keep the workings clear of gas. The passing of the trains through the door on the main jig was not sufficient to make the ventilation bad. He thought the fireman ought to have called the men out of the lower levels. He had had great experience in the Seven-foot Banbury, and had found blowers very frequent. It was quite possible that a blower might have occurred in the up-brow, which would overcome the ventilation of 1,200 feet per minute. He remembered the case of a blower which took fire before it had become explosive, and it burned with a constant blaze four yards square. It could not be extinguished until the pit had been closed. Such a blower as that, supposing a naked light, might cause an explosion, notwithstanding the ventilation described. He considered the managers had taken every possible precaution, and that if the rules had been observed no explosion would have taken place, although there might have been an accumulation of gas.

By Mr. Wynne.—It was possible for a blower of the kind he had mentioned to proceed from a rib a yard thick. He had never seen in a fiery mine the ventilation left to a single door on the main jig.

Mr. Wynne.—Do you call that prudent management?

Mr. Rigby.—My opinion is that, taking into consideration the care displayed in other things, this was quite an oversight.

Mr. Wynne.—Was there any necessity to push the levels forward until the ventilation had been proved.

Mr. Rigby.—There was no necessity, any further than this, that they always like to push on the deep heading.

Mr. Wynne.—And to get coal?

Mr. Rigby.—Not only that, but to prevent the making of other openings. With regard to the door on the main jig, each case must be decided by itself, according to circumstances.

Mr. Wynne.—We have heard that nearly all the places were giving off gas all the way round.

Mr. Rigby.—Yes; it is very likely.

Mr. Wynne.—Then the air sent into the lower workings would be the worst air that could possibly be in the pit?

Mr. Rigby.—Yes.

Mr. Wynne.—Then was there any necessity to push those levels when they must depend upon the jig door and the worst air in the pit?

Mr. Rigby.—In such cases every man must judge for himself. It must be his duty to ascertain whether the air was charged with gas.

Mr. Wynne.—Was it not bound to be charged with gas after passing 18 or 20 faces of workings?

Mr. Rigby.—It might have been quite clear, for this is a coal which does not give off a great quantity of gas, as a rule. The gas comes from joints in the rock. It would be the duty of the fireman to examine the air at different times during the day, that he might know whether it was laden with gas.

Mr. Wynne.—I was asking whether the whole of the gas from the faces did not get into the air sent into the lower levels, and whether the ventilation was not cut off every time that door was opened in the jig.

Mr. Rigby.—Yes.

By Mr. Keary.—I agree with the other witnesses that when the water had been got out of the back dip it was better to drive the up brow than to clear the back dip.

By Mr. Evans.—It was not the duty of the fireman always to be watching the door in the dip in order to bring the men from the lower workings in case of waggons getting off the rails. He might be up in the rise workings, and then it would take more than ten minutes to fetch him back.

Nicholls, recalled, said—There is a deputy to every section of the pit.

By Mr. Evans.—He had never given the firemen orders that when the door was open ten minutes he was to bring the men out of the lower level.

By Mr. Keary.—It was one of the rules that, whenever a collier found gas, he was to give immediate notice to the fireman.

Mr. Rigby, recalled, said, in reply to Mr. Evans—If the return air was not gas laden, a fireman might safely light a lamp in it. It was his duty to ascertain that it was not laden with gas. As a rule it was objectionable to light lamps in the return air. He did not see the colliery before the explosion. When he went down everything had been put into apple-pie order. He thought the explosion was caused by an unlawful exposure of a naked light by a collier.

Mr. Wynne was next examined. He commenced by reading the following report on the case:—Having heard of the explosion about one o'clock in the day, I at once proceeded to Talke, and found everything in confusion. Mr. Johnson, Mr. Addie, and Nicholls were on the bank, having been down for a short time exploring. On Nicholls privately informing me that the stables were on fire, I at once saw that it must be extinguished, or the explorers withdrawn. At my particular request, Mr. Johnson remained at the pit top to receive orders from below, and see that they were executed, and right well he did that. We then descended, and carried the fresh air with us by stopping up with bratticing the opening between the air-brow and the main jig. When we reached the opening below, the third stable on the main jig brow, we crept on our hands and knees to ascertain the state of the fire, not daring to turn the air on to it, lest a flame should be created, and all in the pit killed by a second explosion. After consultation, we determined to cover over the mass of fire with several thicknesses of brattice sheet, and each of us to go in turn in the dark, and trample the fire out, or at least keep it down until buckets could be obtained from the surface and water from the bottom of the pit. Fortunately, success rewarded our efforts. We then carried the air forward some distance, when Mr. Addie and I went down to the bottom of the shaft to see what effect the turning of the gas out of the higher workings would have upon the explorers in the lower part of the pit. After sending up five men alive out of the eastern section of the 7-feet mine, and pushing forward to nearly the far end of the lower level, we came to the conclusion that as all the men and horses we found were dead, the place so hot as not to be endurable, and the other exploring party were turning the gas upon us, it was only prudent to withdraw these men, and prosecute the search with more diligence in the higher workings. That was ably done during the night. The next morning I again commenced my search, and after traversing nearly all the workings, and finding several dead bodies, we came upon a mass of fire in one of the lower levels, and within a few feet of a very large accumulation of carburetted hydrogen, or fire damp. Here too we were fortunate enough to extinguish the fire without an explosion, as water was near at hand, and all worked with a will. On Monday, December 17th, with the assistance of my able colleague, Mr. Evans, I commenced my inspection, and found that the downcast shaft was of about 95 feet area, down to within about 15 feet of the main levels of the 7-feet seam, from whence is an incline down to a scaffold, over the tunnel that is driven from the upcast shaft to the downcast. In this scaffold is an opening of about 30 feet area, through which the air comes into the tunnel, and thence it is turned by double doors into the main up-brow intake, which conducts the air to the highest part of the workings; it is then conducted by doors and brattice cloths into the numerous new cuttings that are being worked forward, and thence down to the main level at the far end; it then returns some distance towards the upcast, but doors are placed in this level to turn it down to the lower one, where it is carried by brattice cloths to the far end, and thence, through the tunnel, to the bottom of the upcast shaft which is down to the 8-feet mine. The downcast and upcast are used to ventilate two other mines. At the 10-feet, 168 yards from the surface, there is an opening of 42 feet area; at the two-row, 200 yards deep, one of 72 feet; and at the 7-feet Banbury, 310 yards, one of 30 feet. The upcast has an area of 95 feet, with somewhat similar openings at depths rather less than the downcast, owing to the dip of the mine, but this shaft is down to the 8-feet Banbury, at 350 yards, where there is only a small amount of work done. In the two upper seams there is a considerable amount of work going on, and they are ventilated by means of these shafts; but a furnace is placed in each, to increase the volume of air passing, so as to enable them to split the current into such quantities as the necessities of each mine may require. The explosion took place at or near the far end of the lower pair of levels, where the clearest traces of the fire are now to be seen, and extended along these levels, dividing at the junction of the tunnel and the jig, driving everything before it. When the fire reached the top of the brow it smashed the doors between the two pits, and the one at the mouthing; but this offered sufficient resistance to turn aside the blast, and send it up the main jig towards the upper workings, when the flame must have been very great, for it set fire to the stables. Beyond the top of the jig there are no traces of fire, but the blast may be traced far beyond this point, though, owing to the openings being so large, the resistance was much less; consequently, the blast was scarcely felt in the back workings, one man coming out to see what was the matter. And I may here remark that if the poor fellows had made for these workings instead of the main jig many lives would have been saved. The force of the blast must have been very great all along the tunnel, and in the seven-feet workings beyond the fault, where all the doors were broken, and all the stoppings blown away, whilst the sump at the bottom of the pit was filled with broken tubs and timber, so that the cage could not reach the landing-place, which made the work of rescue still more tedious. There can be but little doubt in the minds of those persons who examined the mine after the explosion that it occurred in one of the lower parallel levels, and was caused by the smoking of tobacco, the opening of a lamp, or the firing of a shot; but, in my opinion, the real blame does not rest on the men who did either of these things, so much as on those who had the care and control of the mine. When the shaft was sunk to the eight-feet Banbury, the downcast should have been sunk also to the seven-feet, to give a free current of air to the eight-feet, the new workings in the seven-feet beyond the fault, and all below the main seven-feet level, leaving all above to be ventilated as at present, and not attempt to force air after it has been a vertical height in the workings and 220 feet down from its natural outlet to workings 120 feet still deeper. About twelve months ago the water rose in the lower inclines, and caused the floor or thill to swell or rise. When the water was got out the main jig was cleansed for the purpose of sending coals down to the tunnel; but unfortunately the airway (a back dip) was not cleansed, and consequently the lower levels would be always in a dangerous state, and ought not to have been pushed forward. It appears the danger was foreseen, and a new dip driven downwards as far as the water would allow, then another was commenced to be driven upwards, and would have been thirled in a few days. In many places the main airways are contracted to an area of 16 feet, which is at all times objectionable, but the more so when chances of leakage are so great, and the length of the current so unreasonably large, as by that means the air becomes so attenuated, and so loaded with noxious gases, that it becomes useless as a ventilating medium in the later places it enters. The discipline in the pit must have been most lax, or smoking could not have been carried on to the extent it was, without something being done to put a stop to it, nor could the possession of surreptitious lamp keys by the men have been the rule, and not the exception, as is now proved to have been the case, without those in authority winking at it; nor could shots have been fired in a well-regulated colliery in the loose way they appear to have been fired here. I am told that a small split of air was passed through the stopping or door in the main level to go down the jig, with a door at the bottom to turn it along the upper of the two levels. Now, this was useless for the purpose intended, or perhaps worse than useless, as it took off the pressure from the almost closed airway, and every time the tubs went through the door on the jig the whole of the current was liable to pass away to the upcast shaft. With such a mode of ventilation it was highly improper to open so many new places at the same time, releasing gas at every stroke, with totally inadequate means to carry it away, and more particularly the lower levels, which must have been at all times highly dangerous. I, therefore, am of opinion that the explosion was caused by the want of power to ventilate the lower workings; that this work should not have been pushed forward until the pit was sunk, and above all not until there was some means of ventilating it, which does not appear to have been the case; but I may here add, that had it not been for the great barometrical fluctuations during the few days preceding the explosion, the barometer on Tuesday morning showing a pressure equal to a column of mercury of about 30·34 inches, and on Thursday one of about 29·34 inches, it is possible that the danger might have been tided over until the new airbrow was completed. I think it but just to state that every facility has been afforded me to arrive at the truth, and I do not believe that Mr. Johnson has withheld any fact that was material to the elucidation of this melancholy affair. As regards those brave men who assisted in exploring the mine, no words of mine can express the admiration I feel for their heroism; for I witnessed men with a full knowledge of their own danger groping in the dark over dead men, in the strong hope of rescuing a living one. And, what was most admirable of all, a sense of their own danger did not cause them to disobey a single order given.

The Deputy Coroner.—Taking the words of the first special rule, do you think there was an adequate amount of ventilation constantly produced in the mine so as to dilute and render harmless noxious gases to such an extent that the working places and travelling roads were under all circumstances in a fit state for working in and passing along?

Mr. Wynne.—My belief is there would be a sufficient amount of ventilation; but the misapplication of it caused the explosion.

The Foreman.—That only amounts to an error of judgment. We have had several witnesses who said that it was properly applied.

Mr. Wynne.—That is not my opinion.

Mr. Dickson.—Will you please to explain yourself rather more fully?

Mr. Wynne.—No man who conducts a colliery at all with a view to the safety of his men would ever allow any part of it to be dependent for air upon a single door on a jig.

By Mr. Keary.—I have every reason to think the quantity of air was sufficient. The application was defective, because it depended upon the door in the jig. There is no occasion to point out any other way in which it was defective. That is fatal to the theory of good management. Nothing ought to have been done until the back brow had been cleared out. I do not agree with the other witnesses, that the explosion took place in the up brow; but that is not material. I think it occurred in the lower works; but I do not press the point. Any gas sent along would ascend into the up brow. When I saw it there was scarcely a breath of air going in. The opening and shutting of the door in the jig 13 or 14 times an hour would be at all times dangerous. I think it utterly impossible that the journey could be performed in a minute without sending every other train off the rails. The speed would be 15 miles an hour. It may be there is no evidence of complaint of gas in the lower works, excepting the night before the accident, though we have heard that the men reported one of the colliers who attempted to fire a shot. My opinion is, although it may not agree with the evidence, that those places were always short of air; they were bound to be. If there was any ventilation at all, all the gas blown out had to go into the lower levels. There should have been a double sheet instead of a single door in the jig, that one might have fallen as the other was raised.

Mr. Keary.—Then the *gravemen* of your complaint is that there ought to have been two sheets instead of the door.

Mr. Wynne.—No; the lower levels ought not to have been worked at all until the other shaft had been taken down and the back brow cleansed out.

Mr. Keary.—If you had the management of the mine, and after putting up the door you had found the ventilation sufficient, would you have carried on those levels?

Mr. Wynne.—No; it could not have been done safely.

Mr. Keary.—Mr. Coe, Nicholls, and several other witnesses say differently; so that it was only an error in judgment.

Mr. Wynne (emphatically).—It was a very serious one; any captain who steers so near to the wind that the slightest hitch in his tackle strands him does not act the part of a wise captain.

Mr. Keary.—Mr. Coe is a man of great experience; do you think he has given an opinion which he does not believe might be properly acted upon?

Mr. Wynne.—I do not think he has. I do not suppose the mistake was a wilful one, but it was a very serious error in judgment.

Mr. Thomas Evans, Inspector of Mines for the Midland Counties said—I visited the colliery on the 17th of December, four days after the explosion. I believe the gas accumulated in the lower workings, whether in the level or rising I do not know, and that it was fired by the introduction of a naked light. I believe the cause of the accumulation was the absence of a proper amount of air in the far end workings. There was a sufficient quantity of air in the rise workings to carry away the gas given off. It may have been that the door in the jig was left open, or that the ventilation was so nicely balanced that there was not air enough to meet the changing condition of the atmosphere. I think taking one current of air down the shaft and all round the workings and back to the deep heading was not skilful management, and ought not to have been done. It appears that a great deal of gas was given off most places, and that most of it was taken down to the bottom workings. I never before met with a mine where discipline was so lax as this—where shots were fired by anybody at any time—where men were permitted by the firemen to go into places where they knew gas had accumulated, and where lamps were lighted in the return air after it had been all round the colliery. In my opinion the explosion was as much due to lax discipline as to anything else.

By Mr. Keary.—A report ought to have been made to Nicholls every day of places where gas had been found, and he ought to have entered them in a book. Proper lamp stations ought to have been fixed upon, and the men ought to have been told they must go there to have their lamps relighted.

Mr. Keary.—There is no evidence that the manager knew of these irregularities.

Mr. Evans.—Let the jury draw their own conclusions. I have my own opinion.

Mr. Keary.—Can you point to any evidence that the manager knew.

Mr. Evans.—I cannot. I have conferred with Mr. Johnson privately, and I believe he did not know. Perhaps Nicholls did not know, but he ought to have known.

Mr. Keary.—You have heard his distinct and positive statement.

Mr. Evans.—I do not remember; but if he says he did not know, I believe him.

Mr. Keary.—The breaches of discipline you complain of are the firing of shots by the men, the use of naked lights, and smoking.

Mr. Evans.—Those are all I have heard of, but after the evidence we have had of wilful violation of the rules I take it for granted others were treated in the same style.

Mr. Keary.—That is rather an assumption.

Mr. Evans.—Had the colliery been well regulated the manager would have known what was going on.

Mr. Keary.—Is it unusual to ventilate a mine this size with one current of air?

Mr. Evans.—One current might have been enough if it had been taken properly down the low side and then to its natural exit at the top. I do not believe that one fifth of 25,000 feet went through the colliery. I have known a colliery four times this area ventilated by one current of air, and 114 people were killed. I wish to add that so long as men use powder so long shall we have explosions. I have very strong feeling on the subject. It is a most dangerous practice.

Mr. Wynne.—I entirely agree with Mr. Evans on that point.

This closed the evidence which it was intended originally should be laid before the jury.

The Coroner inquired if the jury had anything to say about Mr. Macdonald.

The foreman replied that they should be very glad to hear his witnesses, if he could bring them forward.

Mr. Keary thought Mr. Macdonald was bound to give up the names of his informants, in order that they might be summoned before the jury.

Mr. Hickman, of Kidsgrove, one of the agents of the Miners' Union, who had been taking notes of the evidence for several days, said Mr. Macdonald would furnish the jury with his information, but would not give up the names of his informants.

The foreman considered that was like writing anonymous letters, and stabbing a man behind his back.

After some further conversation, it was decided the inquest should be further adjourned until the 31st instant; and the Coroner and jury requested Mr. Wynne to apply to Mr. Macdonald for his information, and the names of those who had supplied it.

VERDICT OF THE JURY.

The inquiry into the cause of the disastrous explosion at Talke on the 13th December was resumed and completed on Thursday last. The adjourned inquest was attended by Mr. Wynne and Mr. Evans, Government Inspectors of Mines; Mr. R. Heath, Mr. T. Udall, Mr. Keary (representing the trustees), Mr. Gemmell, Mr. Rigby, Mr. Johnson, Mr. Addie, Mr. Coe, Mr. Strick, Mr. R. H. Wynne, the Rev. F. Wade, Mr. Macdonald (secretary to the Miners' Union), and a large number of working colliers.

The Coroner said the last adjournment took place for the purpose of giving Mr. Macdonald an opportunity of supplying the jury with information bearing on the subject, and likely to assist them in arriving at a correct conclusion. Since then, he had received a letter from Macdonald, requesting to be informed whether he might be permitted to make a statement and call witnesses. He told Mr. Macdonald that he saw no objection to his taking that course, and that he should be glad to see him. Under these circumstances they had met, and he could, speaking on behalf of the jury, assure Mr. Macdonald, who he believed was present, that they would be glad to receive any information he or any other person had to give. He (the Coroner) need not remind the jury that the duty they had undertaken was a very serious one, and that they were bound by a solemn oath diligently to inquire and true presentment make of all matters and things given them in charge, to present no one from hatred or malice, and to spare none from fear, favour, or affection. He had every trust that the jury would do their duty irrespective of anything which might have been said out of doors since they last met; and, therefore, he could not help expressing his regret that a document had been circulated, which, if necessary, he could verify himself to be libellous, untrue, and as false as hell. He could not conceive what the object of the parties could have been who had issued that document. Could it have been for the purpose of intimidating the jury, or of preventing the serious inquiry which they had again met to carry on? If so, he was convinced that it would fail in its object.* His sole anxiety was that every publicity should be given to the proceedings, and that the fullest information should be obtained, and to that end he would hold himself at the service of the jury for a month to come if necessary. He did not know what course Mr. Macdonald intended to pursue. They were most anxious to accommodate him in every way, and to hear any witness of his who could throw any light on this unfortunate affair. On Wednesday afternoon he received two letters from Mr. Macdonald by the same post, requesting that certain persons might be summoned, and he handed the names over to Chief Superintendent Sweeting, with directions to use every possible exertion to have those persons present. It was not his (the Coroner's) province to summon persons, but he did that which he thought would most further the end they all had in view. As the adjournment had taken place in order to give Mr. Macdonald an opportunity of assisting the jury, he should be glad to hear what course he intended to take.

Mr. Keary.—I object to Mr. Macdonald making any statement excepting upon oath.

The Coroner.—That would not be evidence.

Mr. Keary.—Then I submit it would not be legal at all. At present we are sitting here to hear evidence, and it would be most irregular to interrupt the evidence by a speech. The time to consider whether Mr. Macdonald should make a speech will be at the close of the evidence, and I may as well say now that I shall object to his making any speech at all.

The Coroner.—Mr. Macdonald says in his letter to me that his wish was to make a statement, and then to call parties to verify it.

Mr. Macdonald.—I do not appear as a witness at all.

Mr. Keary.—Then let your witnesses be called.

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* The document referred to by the Coroner was a small handbill containing an extract from the *Mining Journal* of the 19th ult., to which the following sentences were appended: "May the Lord save you from "the jury that stamped with their feet and gave applause to that creature Coe when he whitewashed the "manager Johnson, and who at once admitted all was wrong. Miners of Staffordshire! Rise in your "strength and call for vengeance on the wholesale murders that have taken place amongst you. The Miners' "Association can save you from it."

Mr. Macdonald.—I regard the Coroner's letter to me as an invitation to attend and make my statement, and call witnesses; and I submit that if the owners of the mine had intended to make any legal objection they ought to have let me know, in order that I might have been saved the trouble of coming all the way from Scotland, and breaking a series of important engagements. However, it will not annoy me to be prevented from making a statement, for if I do not make it here I shall make it to the friends at the Home Office, who are closely watching this inquiry.

Mr. Keary.—Mr. Macdonald cannot charge me with unfairness, because this is the first time I ever heard that he was going to make a statement. I have not the slightest objection to his calling witnesses.

The Coroner.—On what ground do you object to Mr. Macdonald making a statement.

Mr. Keary.—On the ground that at this stage of the proceedings it would be irregular for him to do so. When the evidence is closed will be the time to consider whether Mr. Macdonald ought to be allowed to make a speech. I shall object to his making a speech at all.

After some further conversation,

The Coroner said—If any little irregularity has crept into our arrangements, we must endeavour to set ourselves right. I think, Mr. Macdonald, you had better call your witnesses now, and then we will consider afterwards whether you shall make a speech or not.

Mr. Macdonald.—I am really astonished to be met in this way. I have a letter from the foreman of the jury inviting me to come.

The Coroner.—It appears to me that Mr. Keary's objection is a feasible one; that you should be sworn before you make any statement.

Mr. Macdonald.—You have no objection to my handing the correspondence to the press.

The Coroner.—Not at all.

Mr. Emberton (a juryman) thought that if they listened to anything but evidence they should be kept there until Burslem Wakes. (Laughter.) At present he considered they were wasting time.

Mr. Macdonald thereupon said he would proceed to call witnesses.

Mr. Coe recalled, said—I was not manager of the Lund Hill Colliery when the explosion took place by which 189 lives were lost, but I was connected with the management. I did not leave immediately after the explosion; it was about three months afterwards.

By the Deputy Coroner.—I had been manager from October to January. At the commencement of the new year Mr. Holt, of Wakefield, was appointed manager. The explosion took place on the 19th of February. I was there about four months.

By Mr. Keary.—Mr. Woodhouse, mining engineer, heard me give my evidence at the Lund Hill inquest, and it was upon his recommendation that I was engaged by my present employer, Mr. Heath. I have been with Mr. Heath for about eight years.

Mr. Macdonald.—Had you the management of the underground workings or not?

Mr. Emberton could not see what this had to do with the inquiry.

Mr. Dickson a (juryman) thought Mr. Macdonald should be allowed to proceed. The jury had invited inquiry, and therefore he had a right to put these questions.

Mr. Coe.—Up to January I had the sole management; after that Mr. Holt was manager, and I only remained until I could suit myself. I had the management of the underground workings under Mr. Holt.

The Deputy Coroner.—Then you were responsible.

Mr. Coe.—We were both responsible. I cannot distinguish between a manager and a bailiff. Everybody is responsible in a colliery.

Enoch Jackson, collier, said—In September last, Charles Lawton, under bailiff, engaged me and my brother to act as firemen at the North Stafford pit. I entered on my engagement on the night turn of the 17th of September. Lawton accompanied me through the workings. There was a good deal of gas in the low levels. There were no doors on the main jig, but two cross sheets. I told Lawton there ought to be two doors instead, with two boys to mind them. He said they were as they would have to be. I saw gas in the pit during the whole of that turn. I returned to work on the evening of the 18th. The gas then had very much increased in the lower levels. It was caused by the sheets having been torn down on the main jig by the waggons passing through. I was engaged during the greater part of the night in endeavouring to get them up again.

Mr. Macdonald.—From your first entering upon your duties did you see any smoking?

Witness.—Yes; I smoked myself.

Mr. Macdonald.—Did you ask Charles Lawton whether you might smoke, and did he allow you?

Witness.—Yes.

Mr. Macdonald.—Did Lawton sit down beside you while you were smoking?

Witness.—Yes.

The Coroner here directed that Lawton should be sent for.

The Witness.—It was close to the bottom of the pit where Lawton saw me smoke. I saw shots fired not far from the low levels, where there was gas. I was never informed that it was my duty as fireman to examine the lamps. I saw two men with lamps, and one of them said I might please myself whether I examined them or not, for they had not been examined before. I examined them, and found them unlocked. It was Samuel or Joseph Johnson, or else Thomas Froggatt, who spoke. I worked that night, but never went into the pit again. I saw several men and boys smoking, but I did not know their names.

Mr. Macdonald.—Will you tell the jury why you did not return to the colliery?

Witness.—Because I durst not. I had had plenty while I was there. It was because there was so much gas, and no means of getting rid of it.

A Juryman.—That was your opinion.

Mr. Macdonald.—Yes; and he saved his life by his opinion.

By the Deputy Coroner.—I do not know what was done in the pit from the 18th of September to the time of the explosion.

By a Juryman.—I never read the rules of the colliery, and never saw any.

The Juryman.—Were they not bound to give you a copy of the rules?

The Coroner.—No; not by the present Act of Parliament.

Witness.—I should think it was their duty to put the rules where people could see them.

Mr. Dickson.—Was it not your duty, as fireman, to report the men for smoking?

Witness.—No. I considered Lawton was my master.

By a Juryman.—What are you doing now?

Witness.—Getting coal. If a person were to give me leave, I should smoke a pipe at the colliery where I am now employed. It would not be my business to report anybody for smoking there. If I were the fireman, and the rules said it was my duty to do so, and I knew the rules, it would be different. About three shots were fired on the night of the 17th September. I lighted my pipe by a naked flame. Lawton was present.

By the Deputy Coroner.—I lighted my pipe in the return air, not far from the bottom of the pit.

By the Coroner.—I had not seen the rules in the office at the colliery.

Mr. Emberton.—Was it not the duty of Lawton to give him a copy of the rules, Mr. Coroner?

The Coroner.—By the former Act the proprietors were bound to deliver to every man a copy of the rules, but that has been altered.

Mr. Macdonald.—But, under the 15th section of the present statute, the proprietors, under a heavy penalty, are bound to place the rules where the workmen can see them.

The Coroner.—Mr. Keary has evidence upon that point. At present, a collier is not entitled to a copy of the rules, unless he applies for them.

Mr. Wynne.—It was very much against my will that the law was altered. Formerly the proprietors were bound to supply every man with a copy of the rules before he went to work, but Parliament, in its wisdom, decided that they should only be bound to supply copies on demand. The law at present provides that the rules shall be exposed in the office of the colliery, and that if a man ask for a copy it shall be given to him.

Mr. Emberton.—How can a man be punished unless he has an opportunity of knowing what is right and what is wrong?

Witness (to Mr. Keary).—I have worked at Messrs. Bidder and Elliot's several years —for one year as deputy overman. I know there are rules there. Of course there should be rules for every colliery. I did not ask to see the rules at this colliery. I know the general duties of a fireman.

Mr. Keary.—Do you not know it is his duty to see that no shots are fired unless the place is safe?

Witness.—They differ in various places.

Mr. Keary.—I speak of all places where safety lamps are used. Was it not the duty of the fireman to see that shots were not fired if there was any gas?

Witness.—The men sometimes fired their own shots.

Mr. Keary repeated the question again, and the witness then answered it in the affirmative. He continued: My lamp was not extinguished when I tried the gas. I did not try it to that extent. Sometimes my lamp would fill accidentally. Four men were working in the lower levels, where I found the gas, but they did not say anything about it. A man named Lovatt came to me, and said the pit was filling with gas, because the cross sheets were down, and I went and put them up. The gas was two feet deep over Lovatt's head after he had complained. I did not report this circumstance, because I did not consider it was my province to do so. I left because I thought my life was in danger.

Mr. Keary.—Did you not consider that to a certain extent you were in authority over the colliers there?

Witness.—Yes.

Mr. Keary.—Did you not think it was a part of your duty to warn the men if you found them working in an unsafe place?

Witness.—Of course it was, but when the man over you sees it, it is his duty.

Mr. Keary.—Did you tell Lawton you thought the pit unsafe?

Witness.—It would have been a curious affair for me to have told Lawton that—to have instructed him in such a matter.

Mr. Keary.—Then you did not tell him?

Witness.—No. I should have been acting out of my place.

Mr. Keary.—You thought the men's lives were in danger?

Witness.—Yes.

Mr. Keary.—And that you would be stepping out of your place if you told Lawton what was the state of the pit?

Witness.—I had nothing at all to do with it. (Sensation.) When there is a man over me, I have to obey his orders. I have been abused before now for going over my master. I did not know there were any rules. Six or seven years ago I worked at the same pit. I might have read the rules then. I had a copy given to me. I saw smoking in the lower levels at the bottom of the main jig. I smoked in the tunnel. Lawton saw me smoking close to the head of the tunnel.

By Mr. Wynne.—I cannot tell where the air came into the jig that night. I consider it is safe to light a lamp in the return air after it has been through the mine, but not always. I was never informed that the fireman ought to take the top off his lamp in some place other than the return air. At certain times the return air is as clear as the air in this room. This mine was more fiery at some times than others. I am a practical man, and I ought to know what is right, and I say the lamp-top might have been safely taken off in the return air. I think I have no right, as a fireman, to remove men working in dangerous places.

Mr. Evans to Mr. Macdonald.—Do you think any man of common sense would have allawed the men to work there?

Mr. Macdonald.—No; but he tells you that it was Lawton's duty to look after them.

The Deputy Coroner.—And you have his statement that he did not inform Lawton of the state of the pit.

Mr. Macdonald.—And you have his statement that he had no power to inform him. (Laughter.)

William Jackson, brother of the last witness, was then called by Mr. Macdonald.—He said he was engaged as fireman at the same time as his brother, and was to take the day turn. On the 18th of September, he found gas in the lower levels. On the following morning they were in a much worse state, and the men were not allowed to go to work. The levels were full of gas. He was ordered to alter a brattice, and hang another drop sheet, in order that another up-place might be started. The drop sheets in the jig were frequently pulled down by the trains passing through. He saw smoking during the two days he was there. He saw Edward Dutton, a doggy, smoking with his brother. Lawton was standing by at the time. The men fired their own shots. He could not recollect that any one ordered him to take charge of the firing of the shots. He left because he did not like the work, and also because the condition of the colliery was such that he was afraid to stay. He was not so much afraid of the amount of gas as he was of the smoking. No shots were fired while he was in the pit.

By a Juryman.—Nicholas Fletcher would not allow shots to be fired in one place because there was gas in it.

By Mr. Keary.—Seven years ago he worked in the same pit, and had a copy of the rules given to him. He did not know what a fireman's duties were. When he left the pit in September last he asked for his liberty from Mr. Nicholls, and all he told him was that he did not understand the work. Mr. Nicholls never saw any one smoking in the pit to his knowledge. He was present when Dutton was smoking, but whether he saw him or not he could not say, because they were all standing together. That was in the middle level, a few yards from the mouthing. Nicholas Fletcher was present at the time. He (witness) considered that the pit was dangerous for the men he left behind, if they could think so. He did not know it was his duty to mention the dangerous state of the pit to anybody.

By Mr. Wynne.—It was not a proper thing to expose the flame of a lamp in the top of the tunnel.

Mr. Macdonald said he could call a dozen more witnesses, if necessary, but they would only corroborate what had been already said. He submitted that he had made good the statement which he originally made.

Mr. Keary remarked that Mr. Macdonald must not assume that he had verified his statement. He was prepared to put a very different complexion upon it.

John Kent was then called by Mr. Macdonald, at the suggestion of Mr. Wynne. He said he had worked at the colliery, and had smoked while at work. He could not say he had seen Lawton smoke. He (witness) smoked just when he wanted, and he had seen other men smoke. He had a false key to his lamp, but he had thrown it away. (Laughter.) It was a customary thing for the men to use false keys. He had fired a good many shots himself—he could not tell how many. Neither Lawton or anybody else ever cautioned him against doing so, nor told him that he was acting contrary to the rules. He fired with touch-paper, and took his lamp top off to light it. (Laughter.)

Mr. Emberton rebuked the unseemly mirth excited by some of the witness's answers.

By a Juryman.—He complained to Nicholas Fletcher that there was gas in the pit.

By Mr. Keary.—A man named Draycott fired a shot on one occasion, and caused a small explosion, but nobody was hurt. Draycott was turned away at once.

By a Juryman.—Was that all that was done to him?

Witness.—For all I know.

By Mr. Keary.—He knew that there was a rule that the shots must be fired by the fireman. He fired his shots himself, because it was the custom to do so throughout the pit.

By the Jury.—He had heard the men complain of the place being unsafe from gas.

Mr. Wynne.—Have you not told persons since the explosion that you lighted your pipe at Lawton's lamp?

Witness.—He might have done so. He believed he did, but he did not recollect.

By Mr. Macdonald.—Powder was bought and sold in the pit.

By Mr. Wynne.—He had seen two quarter barrels of powder sent down the pit at one time.

Samuel Highfield stated that he worked in the pit four months before the accident, and saw gas several times in the lower levels, but not enough to prevent him from working.

Several other persons were then called at the request of Mr. Macdonald, but none of them answering to their names, and some delay taking place,

The Coroner said it was a hardship upon the jury to detain them unnecessarily. At the same time he was willing to hear any one who had any further information to give.

Mr. Macdonald said he was quite content to leave the case where it was, because he felt that he had verified his statement. He regretted that the persons who had just been called were not summoned.

The Deputy Coroner said the notice he received was so short that it was quite impossible.

The Coroner then said that if Mr. Macdonald were allowed to make a statement he must confine himself strictly to the evidence, and must not, to use a legal phrase, travel out of the record.

Mr. Keary remarked that while it would have been quite competent for him to have objected to Mr. Macdonald making a speech at all, he should be sorry for any one to suppose for a moment that his clients were under any apprehension respecting anything he might say, or that they wished to suppress anything. He should not therefore press his objection, but must request Mr. Macdonald to confine himself as much to the evidence as a legal advocate would do.

Mr. Macdonald then stated his reasons, with which our readers are already familiar, for attending the inquiry. It had been said that his information had been supplied by persons on the spot, and particularly by one gentleman whom he had long known as a friend. [A Juryman: Name him.] He meant Mr. Hickman—(laughter)—of whom he had not asked a single question. The information he had produced had been gathered by an officer of the Miners' Association, one of the chief objects of which was to obtain an amendment in the law under which Mr. Wynne was an inspector. He submitted that he had proved that for months before the explosion the pit was in a state which was totally disgraceful and unworthy of a civilized country—that there was in reality no management at all, and that the workmen were exposed to every whim and irregularity on the part of their fellow workmen, who were allowed to do just as they pleased.

Mr. Dickson requested permission to observe that at a former sitting he had no intention of charging Mr. Macdonald with wilful falsehood. What he meant to say was that the evidence, so far as it had then gone, did not warrant the statement which Mr. Macdonald made.

Mr. Keary then addressed the jury, in a very able speech, on behalf of the lessees. He said in all fearful colliery catastrophes the managers felt that they were to some extent placed upon their trial, and it was quite right it should be so. It was the duty of the gentlemen he who represented, it was the duty of the Coroner and the Government Inspectors, and above all it was the duty of the jury, to investigate closely the mode in which pits were managed in which such calamities happened, and to see whether the managers were in any way the cause of them. It was also the duty of the jury to inquire whether proper regulations were made for the good order of the pit, and whether the managers in any way discouraged those who had complaints to make. Tried by these tests, which it was very proper to apply, he was very much mistaken if the gentlemen whom he represented were not entitled to acquittal at the hands of the jury. When he said those whom he represented, he did not mean exclusively the owners of the mine, who lived at a distance, but more particularly Mr. Johnson and Mr. Nicholls, the persons who were really responsible. There could be no doubt that the chief responsibility rested upon upon Mr. Nicholls, nor could the jury have failed to be satisfied that he was a person of skill and intelligence. They had heard that he had held his present position for nine or ten years, and that he had been a responsible manager of collieries altogether for 22 years. *Primâ facie*, therefore, he was a person of skill and experience, and the jury had the corroborative evidence of several gentlemen that he had laid out the works in a skilful and proper manner—that the way in which the pit was conducted was a credit both to him and to Mr. Johnson. That proper rules had been made to secure the safety of the men was a matter beyond dispute. The rules had been placed in the hands of the jury, and also in the hands of Mr. Macdonald, who no doubt would have pointed out the omissions if sufficient care had not been shown in framing them. He would call the attention of the jury to two or three of them. Rule 19 said that every chartermaster and underlooker, in the discharge of his duty, was expressly ordered to give his first attention to the safety of the lives and limbs of those under his charge, and to suspend all operations attended with unusual risks until he had received instructions from the manager to proceed. This showed that the first consideration was to be given to the safety of the workmen. He (Mr. Keary) had asked Nicholls whether he was ever restricted by considerations of expense, and he had assured the jury that expense was no object, and that it was never allowed to interfere with the taking of precautions to ensure the safety of the men. Then there was another rule—that the chartermaster or his deputy should examine the state of the workings at least one hour before the men went into them, in order to ascertain that they were safe. Workmen were prohibited by another rule from going into any place where there was gas, except with a safety lamp, and in company with the person having charge of the pit. Then there was a rule prohibiting the men from firing shots without express permission. Smoking and the possession of lamp keys were also forbidden. All these rules had been laid down, and if they had been observed in all probability this unfortunate accident would not have occurred. The jury had heard of the double inspection of the lamps which took place every night and morning in order to guard against their being tampered with, and, in short, there was an express rule against every practice which might put the lives of the workmen in danger. He believed he could safely say that throughout the whole of the inquiry, although nearly 40 witnesses had been examined, not a single suggestion had been made by any one that either Mr. Johnson or Mr. Nicholls was cognizant of either of these rules having been violated. The only case in which it had been proved that a breach of discipline had been brought to the knowledge of Mr. Nicholls was that of the man Draycott, and he was immediately dismissed; and it had also been stated, that in another part of the colliery some men who had been detected tampering with their lamps had been taken before the magistrates and fined. What more could the managers do? But it was stated that the state of discipline was very lax. If that meant that the managers knowingly winked at breaches of the rules, all he could say was that such a statement was directly contradicted by the evidence. Amongst such a number of men it was, of course, impossible to prevent disobedience. Colliers were, unfortunately, a reckless class; but they were not alone in that respect, as the accident on the ice in the Regent's Park had shown. When people got accustomed to danger, they became reckless; for there was nothing to which the saying might be more forcibly applied—"Familiarity breeds contempt." With regard to the statement of Mr. Macdonald, that the pit was in such a fearful state for months that an explosion might have taken place at any moment, all he could say was that it was not in any way borne out by the evidence. Mr. Macdonald had called two men, who said they were afraid to remain in the pit on account of the gas; but he (Mr. Keary) would do those men the justice of believing that their apprehensions had been subsequently magnified by the fact of an explosion having happened. He could not believe they would quietly have left the pit, without saying a word, if they had really believed that hundreds of their fellow creatures were in imminent risk of being blown to pieces. Besides, the general tendency of the evidence was to show that the colliers thought the pit was safe. He did not mean to say that the mine was entirely free from gas, for if there had been no gas there would have been no occasion for safety lamps. There was very little doubt that the explosion took place in the up brow in the lower levels, and that the immediate cause of the accident was the exposure of a naked light by one of the workmen. A good deal of criticism had been employed by the Government Inspectors—and he did not complain of it—as to the mode in which the works were laid out. If they could hit a blot in the management it was quite right for them to do so; but he wished to draw the attention of the jury to the fact that at the beginning of the inquiry Mr. Wynne seemed to think that the accumulation of gas was to be attributed to the fact that the back brow which had been swollen with water had not been cleaned out, but Mr. Nicholls considered it was the better course to drive the up brow, and the jury had seen that it only required, at the time of the accident, to be driven one yard further in order fully to supply the place of the back brow. Several of the scientific witnesses had given it as their opinion that the course pursued by Mr. Nicholls was the better of the two. Then they came to the subject of the single door on the main jig. First of all Mr. Wynne complained that there ought to have been two doors; but when Mr. Nicholls said that if there had been two doors in so short a distance they would practically have both been open at the same time, Mr. Wynne agreed with him, and then suggested that there ought to have been two sheets instead of one door. It turned out, however, that there were formerly two sheets, and that their existence was one of Mr. Macdonald's grievances. The fact was that at first two sheets were tried exactly in the way Mr. Wynne had suggested, and they were found not to answer, as the evidence given that day had clearly proved, for they got torn down, and diverted the air current. Mr. Nicholls did the best he could under the circumstances, by putting one door where he found that two sheets would not answer. Mr. Wynne thought that the ventilation of even a small portion of the mine ought not to have been allowed to depend upon a single door, but that was a matter of opinion; and while he did not for one moment wish to undervalue Mr. Wynne's opinion, he would remind the jury that Mr. Coe, a gentleman of great experience, said that with the amount of ventilation he saw after the door had been replaced he should have had no hesitation in driving the levels to the extent to which they had been driven by Mr. Nicholls. In this respect an error of judgment might have been committed. Mr. Nicholls was not infallible, but he exercised what he believed to be a sound discretion, and he was borne out by gentlemen of great experience. Possibly they were all wrong. He did not wish to set up anybody's experience against that of Mr. Wynne, but in balancing the evidence he had no doubt the jury would come to the conclusion that a man was not to be blamed for an error of judgment which he shared with persons of great experience. There could be no doubt as to the cause of the explosion. Either from the effects of a sudden blower, or from the slackening of the ventilation in consequence of the door on the main jig being kept open, an accumulation of gas took place in the up brow, and one of the miners at the moment exposing a naked light of some kind or other, an explosion ensued. He should be sorry to say a harsh word about the men who had met with their death in that way, but no doubt the accident was caused by their habitual negligence, and therefore, while they felt sympathy for the dead, they must not do injustice to the living. If the jury thought the managers had done everything they fairly could they would not cast a stigma upon them by censuring them. No one could feel more deeply on account of this unfortunate occurrence than Mr. Johnson and Mr. Nicholls, and the owners of the pit had in every possible way shown their sympathy with those who had perished, and therefore they would feel all the more keenly an undeserved censure at the hands of the jury. After a few remarks on the subject of the sale of powder in the pit, which he said had nothing whatever to do with the explosion, Mr. Keary concluded by expressing his conviction that the jury would return an honest and impartial verdict.

Mr. Wynne wished to explain that he had not altered his opinion with regard to the back dip. He still thought that nothing which was not absolutely necessary ought to have been done with only one air course. He did not say it was a proper thing to have two sheets in the main jig, but that two sheets were better than one door. The evidence given confirmed him in those points.

The Coroner then summed up the evidence with his accustomed care. He complimented the jury on the attention they had paid to the evidence, and said he thought they would have little doubt as to the immediate cause of the catastrophe. The law of the case might be taken to be, that if the person whose duty it was to cause a mine to be properly ventilated by causing an air heading to be put in where necessary omitted to do this, and another was killed by an explosion of fire damp, he was guilty of manslaughter. Or, in other words, if he omitted to take ordinary and reasonable precautions in not putting in an air heading, where a man using ordinary diligence would have done so, he was guilty of manslaughter. That of course presupposed that the manager of a colliery had acted in a thoroughly reckless and careless manner. If they thought there was evidence to show that the manager had acted in such a manner in this case, it would be their duty to return a verdict of manslaughter. On the other hand, Mr. Justice Paterson said it was perfectly clear that no man could be indicted for manslaughter for a mistake or error of judgment; if he acted to the best of his judgment and ability in the discharge of his duty he was not criminally responsible; but if a person placed in a situation of great responsibility and trust conducted himself with gross negligence and inattention, and death ensued, he was clearly guilty of manslaughter. The jury would therefore have to ask themselves whether they thought Mr. Nicholls (for he left Mr. Johnson out of the question) had been guilty of such reckless and negligent conduct as made him criminally responsible, or whether he had committed an error of judgment. The Coroner intimated that he thought the unfortunate man Lismore, by lighting his pipe, had been the direct cause of the explosion, and that the utter recklessness displayed by the men made it almost impossible to keep the mine safe. He then touched upon the conflicting nature of the scientific evidence as given on the one hand by Government Inspectors, and on the other by the colliery proprietors and managers who had been examined; after which, he eulogized warmly the bravery of those who descended the pit soon after the accident for the purpose of endeavouring to save the lives of their fellow-creatures, and referred to the handsome subscription which had been entered into for the relief of those bereaved. He then asked the jury whether they could place their finger upon Mr. Nicholls, and say he was guilty of manslaughter. For himself, he thought there was nothing in his conduct which made him criminally liable; but if the jury could point out any particular in which an improvement could be made in the management of the colliery, he was convinced, from his knowledge of the parties, that Mr. Johnson and Mr. Nicholls would pay the best attention to their recommendations.

The jury then retired, and after an absence of upwards of an hour returned with the following verdict:—

" We find that Nicholas Fletcher and 90 others met their death by an explosion of gas in the North Staffordshire Iron and Coal Company's Banbury Mine, on the 13th of December last. No positive evidence has been brought before us to show how the accident occurred; but we are of opinion that an accumulation of gas had taken place in some of the lower workings, in consequence of the upsetting of a train of coals in a doorway, and that the gas coming in contact with a naked light, unlawfully exposed by one of the miners, exploded. We find that if the rules and regulations made by the managers of the pit had been carried out as they *ought* to have been by their subordinates, the explosion might not have taken place. We regret to see the culpable negligence shown by James Bossons and Charles Lawton in violating the rules made for the protection of life and property in the pit. We should suggest that means be adopted by Mr. Nicholls, the underground-bailiff of the mine, for carrying out more strictly the rules of the pit with regard to the men firing their own shots, brushing out the gas themselves, smoking pipes, and re-lighting their lamps in the return air. We cannot too strongly urge upon the Government the necessity of appointing additional inspectors of mines."

The Coroner.—Then, irrespective of the observations you have thought it your duty to make, you find that the deceased persons came by their death in an accidental way by an explosion of fire-damp.

The Foreman.—We do.

The signatures of the jury having been obtained to the verdict, they were discharged by the Coroner, who in Her Majesty's name thanked them for their valuable services.

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COLLIERY EXPLOSIONS.

REPORT

ON

THE OAKS COLLIERY EXPLOSION,

BY

J. KENYON BLACKWELL, ESQ.,

WITH

MINUTES OF THE EVIDENCE TAKEN AT THE CORONER'S INQUEST, AND TWO PLANS OF THE OAKS PIT.

Presented to both Houses of Parliament by Command of Her Majesty.

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REPORT.

Sir, Paris, March 30, 1867.

I have the honour to report that, in conformity with your instructions, I attended the adjourned inquest held at Barnsley upon a part of those persons who died from the explosion of fire-damp in the Oaks pit on the 12th of December last.

This inquest was commenced on the 14th of December before the coroner for the district, Thomas Taylor, Esq., and was continued by successive adjournments to its close on the 31st of January.

The Oaks colliery belongs to Mr. Thomas Dymond and the representatives of the late Mr. Timothy Marshall.

Mr. Dymond is the resident managing partner; but the entire responsibility for the underground working and ventilation of the pit rested on Mr. John Thomas Woodhouse, of Derby.

The seam worked at the Oaks is that locally termed the Barnsley Main coal.

All the large collieries in the Barnsley district are working this seam, which is the thickest and most valuable bed in the series. No other seam is worked in this range of collieries, which extend along the outcrop of this coal.

The Oaks colliery is situated about one and a half miles from Barnsley, near the South Yorkshire railway and the Dearne and Dove canal.

There was an explosion at this colliery in 1847 by which 73 persons were killed.

There have been other severe explosions in the collieries working this seam of coal in the neighbourhood of Barnsley; at Darley Main in 1849; at Lund Hill in 1857; and at Edmund's Main in 1862.

The Barnsley Main coal is about 8 feet in thickness, The dip at the Oaks pit is about three inches in the yard a few degrees to the south of east.

This coal ignites with great facility. At the depth at which it is worked at the Oaks it is quite dry.

There are two downcast shafts in this colliery adjoining each other. Both are employed in winding coal. They are each 7 feet 6 inches in diameter and 285 yards deep.

The cupola or upcast shaft is situated about 400 yards to the north of the downcast shafts. It is used for ventilation only. It is 10 feet 9 inches in diameter, and, including the cupola, is 289 yards deep.

The furnace used for ventilation contains two grates. Each is five feet wide. The bars are six feet in length.

A split of intake air of about 17,000 cubic feet per minute was carried to this furnace, and thence by a dumb drift 70 yards in length to to the cupola shaft, which it entered about 18 feet above the return air.

The coal in work is situated almost entirely to the deep of the shafts. The extreme end of the dip headings in continuation of the engine plane is one mile to the deep from the pit bottom. The coal at this point is about 450 yards deep.

The extent of this colliery is about 450 acres. Of this 300 acres are already worked. The output was nearly 4,000 tons per week.

The No. 1 plan shows the state of the workings in July and the ventilation from measurements in December 1866.

The No. 2 plan, on a smaller scale, gives an index of names, the quantities of air, and the numbers of men working in the different districts of the pit on the day of the explosion.

A glossary of technical terms is also given.

The evidence, abstracted from the shorthand writer's notes, is classified according to its subjects. The order of date is therefore not followed in all cases.

The first explosion took place about a quarter past 1 on the afternoon of the 12th of December. The working for the day had nearly ended. About one hour later the greater part of the men would have left the pit.

Mr. Carr, who was by the canal near the cupola when it occurred, saw the first straight rush upwards of smoke and dust through that shaft; but he saw no fire or sparks mingled with the smoke, nor were any of the fallen lumps of soot which he examined on fire.

On arriving on the pit hill he observed that the two downcast shafts continued for a short time to upcast a very light smoke, but not rapidly. This soon ceased, and the air again went down these shafts as usual.

The currents of air in the pit must therefore during this period have been reversed. The heated air which reached the downcast shafts from the site of the explosion must have temporarily overpowered the heat of the furnace at the cupola.

The engine was in motion when the explosion occurred. The cage in the No. 2 shaft was coming up loaded; that in No. 1 was going down empty.

The No. 2 cage broke loose; the No. 1 was so much damaged that when it was drawn up it had to be replaced.

Mr. Dymond, Tewart the under viewer, the deputies, and others now arrived.

As soon as the No. 1 rope could be drawn up, a new cage put on, and the No. 2 rope taken off, Mr. Dymond and the others went down into the pit to rescue those who were still living.

The fire and the blast of the explosion had however so affected the whole pit, that of the 340 men and boys who were in it at the period of the explosion only 20 were brought out alive, and 14 of these 20 have since died from the injuries which they had received.

All these men, with one exception, that of the furnace man Tasker, were in or near the downcast pit bottom when the explosion happened.

Assistance from the neighbouring collieries now began to arrive, but it was found that the No. 1 rope was so much damaged that it was necessary to take it off and to replace it by a new one.

When this had been done the chief mining engineers of the district and numerous volunteers went down to explore the pit and endeavour to save life.

The danger to which all who entered the pit were themselves exposed is evident from the subsequent explosions and loss of life among the volunteers.

The loss of life by the second explosion, which occurred about 9 on Thursday morning the 13th of December, amounted to 27, including Mr. Parkin Jeffcock, partner of Mr. Woodhouse, Mr. Smith, of Lund Hill, Tewart the underground viewer, and Sugden, and Siddons, deputies at the Oaks.

One man, S. Brown, was brought up out of the pit early on Friday the 14th of December, by Mr. Mammatt and Mr. Embleton, jun., who, after three or four explosions had occurred, went down at the imminent peril of their lives to rescue him.

One of the first sounds, following almost instantaneously the shock, rush, and noise of the explosion, heard by the men at the downcast pit bottom who were afterwards saved, was that of the falling loaded cage in No. 2 shaft.

Youle heard what he supposed to be a shot in the new stone drift, but which was no doubt the sound of the explosion; he then found himself in the flame, and heard a loud report which he believed to be the cage falling.

Bates heard the sound of what he also supposed to be a shot, but which he said sounded as if it came from a distance, and in two or three seconds the flame came upon him.

R. Thompson said that the report did not sound so loud as that of other shots.

From the evidence there can be no doubt that the sound which these men heard was that of the explosion, not that of the shot. In the lamp cabin where they were, the noise of the cages ascending and descending the shafts would be constant, and would very much impede the hearing. Youle was rather deaf.

The cage in all probability broke away in the shaft from the sudden recoil of the air which immediately after the explosion must have rushed into the pit to fill up the void caused by the condensation of the ignited gases.

There must necessarily be contrary motions in the air when a great explosion occurs. The violent blast caused by the expansion of the inflamed gases comes first; then the recoil to fill the vacuum produced by their condensation follows almost instantaneously.

The circumstance that Youle and the two colliers, Bates and Thompson, whom he had called into his cabin, were at the time of the explosion expecting a shot to be fired in the new stone drift, caused them to believe that the sound of the former was that of the shot; and thus to conclude from this supposed coincidence in time that the firing of the shot had occasioned the explosion.

This opinion had been very generally adopted by those who were imperfectly acquainted with the facts or not able to form a correct judgment with regard to them.

It was, however, stated by Marsh that he assisted in bringing two dead bodies out of the new stone drift after the explosion; and that one of these was 10 yards in. These men certainly would not have been in the drift at the moment when they expected a shot would be fired there.

Marsh found Hunt, one of the contractors for the drift, dead on the engine plane, a little beyond the top of the steps.

Haigh and Cartwright found Wilson, the deputy who had fired the shot, living near the same place.

These two men, Wilson and Hunt, must therefore have gone round 150 yards after the shot was lighted, it having been unquestionably fired from the drift side.

But after Wilson had lighted this shot these men would undoubtedly wait at the end of the drift a sufficient length of time for it to go off. They would not allow any one to enter the drift while they were there, nor would they go round to the top of the steps until from the shot not blowing out the ramming into the drift they concluded that it must either have missed or have blown out on the other side.

Mr. Maddison and Stephenson both prove that this shot was fired; but, from the hole having been drilled to within 9 inches of the steps' drift and inclined downward, the resistance was so slight at the steps' end that the powder did not exert sufficient force to blow out the ramming at the other end into the drift.

The shot had no other effect than that of lifting about a barrowful of stone off the upper part of the hole on the steps' side. It could not have produced a concussion in the air at any distant point. The sound from it would not be loud; and not being produced in the drift where all previous shots had blown out it could not, in my opinion, have been heard in Youle's cabin.

The sound heard by Youle, Bates, and Thompson appears therefore unquestionably to have been that of the explosion, not that of the shot. The supposed coincidence in time of these two occurrences did not exist.

This shot blew out on the steps into a current of intake air of nearly 23,000 cubic feet per minute at a great distance from any place where gas could lodge.

If there had been any leakage of fire-damp into the intake air currents of the pit near the steps, in sufficient volume to cause this explosion, this leakage would have been subsequently observed by the mining engineers and other experienced men who examined the pit. But none of them perceived any such leakage of gas in any part of the pit which they visited.

Another theory founded like the former on this supposed coincidence in time, in which this firing of the shot in the drift was supposed, although in a different manner, to have caused the explosion, had also many advocates among those who were not able to judge with accuracy on such subjects.

According to this theory, the shot had blown through the floor of the drift into the south-east returns, which cross at a depth of about 9 feet under it, and had thus exploded them. This explosion had spread itself throughout the pit.

But even granting that these returns could at the period of the explosion have been in a state sufficiently charged with fire-damp to be fired; that this gas could have entered them without the men having been previously warned of the fact by their lamps going out; and that this shot had reached the returns; none of which suppositions appear possible; it is certain that the explosion could not have traversed them without blowing out the doors at the foot of the steps which separate these returns from the intake air.

The outer door of this pair was, however, found to be quite undisturbed. The outer door also in the pairs of doors adjoining these returns near the cupola shaft was also found to be uninjured.

All the experienced witnesses who were examined were unanimous in denying the possibility of any shot in the new stone drift, or any shot which blew out on the steps, having had any effect in producing the explosion.

If the explosion had originated in this part of the pit, the appearances presented, when it was re-entered, must have been entirely different from what they were.

The flame and blast of the explosion seem to have reached the downcast shafts through all the openings to the south and east.

They traversed all the south levels. They evidently reached the pit bottom not only by the engine plane, but by the dip ending and the old south level.

All the witnesses concurred in stating that on descending the engine plane they found the force of the blast had been much greater the farther they went from the downcast shafts to the deep.

At the top of the engine plane the corves were standing on the rails almost undisturbed, and in the north level and furnace drift the blast had been only slight, but it had been severe at the mouth of the new level; and it seems to have extended violently along the top pass by level and up the endings to the north-west of that level.

The greatest violence of the explosion had however been exerted at the point where the short slant, which connects all the dip south levels and the dip slant with the engine plane, comes out into it, about 50 yards to the west or rise of Thompson's box hole, and 800 yards from the pit bottom.

But, from its effects on the men throughout the pit, the force and violence of the blast, if not the actual fire must have extended more or less violently everywhere, for none were able to escape to any distance from the places where they were working.

The 20 men and boys who were brought out of the pit above were all either in or very near the downcast pit bottom. All of these were so much injured that 14 out of the 20 died within about 24 hours after being brought out.

Only one man who was at any distance from the downcast shafts, the furnace man Tasker, escaped the effects of the flame, the violence of the blast, or suffocation from the after-damp which filled the pit immediately after the explosion. He was in the drift through which a current of about 17,000 cubic feet of air per minute was passing direct from the downcast pit bottom to the cupola.

The bodies found seem to have been in the following positions; but, from the number of volunteers who went into the pit, it is not possible to determine more than generally the facts with regard to this.

There appear to have been 2 bodies found in the south level, 2 in the new stone drift, 2 in the dip ending, 5 in the new level, 2 in the engine plane and in the travelling road, 2 in the top pass-by level, 9 at Thompson's box hole, 35 in the dip north level, and 2 in the dip headings; making 61 altogether.

The bodies found at the end of the stone drift in the dip north level appear to have been about the half of those who were working in that level in the No. 10 district.

No more were found in this level, although it was explored by Mr. Brown, Mr. Platts, and Mr. Smith, of Lund Hill, 200 or 300 yards beyond the point where these bodies were found.

The fact that these men were not burnt is no proof that at the moment of the explosion the flame did not enter the dip north level. They were not working in the level, but in the banks at some distance to the rise.

These men were destroyed by the after-damp, which met them in the level while they were endeavouring to escape. This after-damp would after the explosion enter the level from the engine plane, and also pour out from the overcast, which was blown down, by which the returns from the dip slant and the dip headings were carried over the level about 100 yards south of or nearer to the plane than the place where these bodies were found.

The fire and blast of the explosion were very severe at Thompson's box hole.

There were about nine bodies of men and boys found here, who appeared to have been working where they were found. The clothes which they wore were in some cases burnt off them.

These bodies had been blown out northward into the plane. Whatever the box hole contained had been swept out in the same direction.

The fire and blast which swept through this cabin may have entered it at its south end either from the dip slant or from the dip south levels.

No one was able to penetrate more than a few yards beyond this point into either of those districts on account of the after damp and the obstructions caused by the explosion. No part therefore of the dip slant or of the dip south level were explored.

Mr. Platts descended the engine plane to a distance of about 150 yards below Thompson's box hole. He was driven back by the after-damp and explosive gas which he found there.

There were nearly 100 men and boys working in the dip headings, the dip slant, and the dip south level. Some of these men must have been within 250 yards of the engine plane. None of them were seen by the explorers, except two boys found by Mr. Platts in the plane below the box hole.

The fire from the explosion appears to have entered the top pass-by level. The violence of the blast must have been severe there. It had extended up the endings to the north-west toward the cupola shaft.

Although this level was explored to a distance of probably 400 yards from the engine plane, nothing whatever was seen of the 20 or 25 men who were working near its extremity in No. 11 district.

The new level was penetrated to a distance of about 250 yards from the engine plane to the point where it forms a junction with the dip ending, coming direct from the downcast shafts. The destruction in this level and in the ending was considerable. No person got in beyond this junction.

The five bodies found in the level and the two found in the dip ending appear to have been those of horse drivers.

None of the 80 or 90 men in this level, neither those who were working near its extremity toward the south nor those at the north end, about 400 yards from the downcast shafts, were able to escape to any distance.

The south level was explored to about 400 yards from the pit bottom. The No. 2 jinny, branching from it to the south-west, was explored to a point beyond the overcast, about 600 yards from the bottom.

No men were found escaping in either direction. The 30 or 35 men working about 300 yards beyond the overcast had not been able to reach that point.

It is evident, therefore, that throughout the pit the effect of the explosion was such as to arrest the men almost on the spot where they were working, and to prevent entirely their escape. All communication with the downcast shafts was cut off.

In my opinion there can be no doubt that this explosion originated either in the dip headings, the dip slant, or the dip south levels. This was the opinion also of all the experienced men who were examined.

The violent fire and blast which swept through Thompson's box hole, and entered the engine plane by the short slant to the rise, seem rather to have come from the dip slant or dip south levels than from the dip headings.

The Oaks pit is entirely surrounded by open airways, which follow the boundary along the line of solid coal.

The engine plane unites all the levels which traverse the coal on the strike of the measures at one end; at their extremity they are united by this external aircourse which surrounds the pit.

Within each district the boardgates and endings complete these connexions, which are only interrupted by a few doors or sheets to guide the air.

Almost everywhere throughout the pit there were large goaves, containing fire-damp to a greater or less extent, open along their upper or rise side into the working air.

When this explosion had commenced to the south-east, in the deepest part of the pit, there was no obstacle to its extension throughout.

It spread along the exterior of the pit, following the line of solid coal to the west and rise of the seam, and rushed out to the downcast shafts through all the levels, the engine plane, and the endings.

At the same time it crossed the engine plane and passed through the two deep north levels and the airways with which they are united toward the cupola shaft.

The doors and sheets used to separate or guide the air, which were found after the explosion to have been carried away, had gone without exception into the returns, showing that the explosion must have originated in the intake air channels.

When a great explosion like this occurs, in which a large volume of fire-damp is ignited, it gathers up and inflames in its course all the gas which it meets.

Where there are large goaves it probably puts in motion and ignites considerable volumes of fire-damp, the presence of which is not ordinarily evident.

Ignition once commenced the motion produced by the expansion of the inflamed gases causes the fire and blast of the explosion to spread themselves in every direction where resistance is not encountered, until the force so generated is exhausted.

An explosion rushes out toward and through the shafts of the pit where it occurs because the resistance to the expansion of the ignited gases is least in that direction.

It finds the necessary supplies of oxygen in the intake air currents and propagates itself along them.

At the same time it radiates away from its site of origin in every direction where there is the least resistance to its expansion.

Not only does the explosion, bursting and overthrowing all doors and weak stoppings, sweep out the gas lying in the goaves, but in a dry and dusty pit where the currents of air in motion can gather up large quantities of finely divided coal dust much of this must be decomposed under the action of the flame and must add fuel to the explosion.

An explosion thus augments in volume and violence as it spreads beyond its site of origin.

The men in the pit, if not struck down instantaneously by the fire and blast, have to encounter in their efforts to escape not only the after-damp but the heated air and the hot coal dust which is diffused through the air.

The coal in the Oaks pit was found to be becoming more fiery as the workings were extended to the deep.

No other seam which could have had any effect in draining the coal strata of the fire-damp they contain had been worked either above or below the main coal.

In addition to the exudation of this gas from the faces of the coal exposed in the workings, and that poured out by the goaves, the workings in this pit as they penetrated farther and farther to the deep became more and more liable to great and sudden irruptions from the roof and floor.

The magnitude and violent nature of these outbursts will be understood from the evidence of Mr. Minto, Mr. Platts, and others.

Fire-damp exists under enormous pressure at the depth which had been reached in the Oaks pit until that pressure is relieved by opening and working the coal.

This gas had therefore a constant tendency to discharge itself in large volumes into the workings of this pit.

The cause of this is evident. Coal has undergone chemical change since its deposition. The fire-damp of mines has been separated from the solid matter of the coal by this action. It remains imprisoned in the pores and fissures of the coal wherever the superincumbent strata are sufficiently thick to prevent its escape.

This pressure therefore increases with the depth.

Some cases may be found which seem at first to be exceptions to this rule; but when examined they will be found to be caused by particular local conditions in the strata. For example, wherever water can penetrate from the surface fire-damp can exude. But when the mine is dry, when no percolation from above can take place, the pressure on the fire-damp increases with the depth.

This shows the extreme danger to be encountered by the rapid and entire working out, before any preliminary drainage of this gas has taken place, of a thick and deep seam of coal; especially when, as at the Oaks, the tract so worked lies immediately to the rise of a large maiden coal field.

Mr. Woodhouse stated that he had found the Oaks pit to become more fiery and the outbursts of fire-damp larger as the workings approached the deep.

In addition to these outbursts the constant exudation of fire-damp from the faces of the coal exposed in working and its presence to a greater or less degree in the goaves, from which on a sudden fall in the barometer it might pour itself out into the air of the mine, had to be provided for by the ventilation.

Coal is fissured by a system of cleavage planes crossing the beds in a parallel and more or less vertical direction. These planes are locally termed the board of the coal. As each new line of cleavage is cut in working, a new channel is opened for the escape of gas.

The strata above and below the coal are traversed by the same cleavage planes.

As soon, therefore, as the roof and floor are exposed and liberated by working, new channels in them are presented for the discharge of gas.

When a bed of coal eight feet thick is worked away along a face 400 or 500 yards in length the roof and floor are set free in a dangerous manner.

The roof falls many yards high, and although it may fall so close to the face of the cool that no one can climb up to any distance, the interstices between the fallen masses are still pervious to gas, and continue to be so for a long period.

A goaf of 20 or 30 acres in extent lying to the deep of the working faces in which fire-damp may exist up to the very edge without passing visibly into the air currents of the mine is therefore a most dangerous reservoir of gas.

The absence of fire-damp in a visible quantity in the air of such a pit at one period affords no certainty of its absence at another. A fall of the roof or a fall in the barometer may bring it out suddenly, and in a large quantity.

The test of its presence offered by the flame of the safety lamp is very rude. A more accurate instrument for determining the exact per-centage of this gas is required by miners.

Fire-damp is not shown by the lamp until the flame begins to elongate and the admixture is approaching the firing point. The better the ventilation the less visible fire-damp is by this test until this point is nearly reached.

From the concurrent testimony, not only of the colliers, but of the two deputies at the Oaks who were examined, fire-damp was almost constantly present in the goaves throughout the greatest part of the pit.

The colliers who were examined complained much of the effects of this fire-damp when they had to go into the goaves to fetch out stone for packing.

At the time when this explosion occurred in the Oaks pit, there were wall faces in progress on the dip north and south levels and the dip slant, amounting altogether to 1,250 yards in their aggregate length, and five large goaves were being formed in close contiguity to each other to the deep of these wall faces.

The roof and floor throughout those deep districts were therefore in a constant state of movement and creep from the contiguity and the extent of these workings and the rapidity with which they were being carried forward, rendering them peculiarly liable to sudden outbursts of gas.

Although the total amount of ventilation was large, and on the whole well distributed, a deficiency of air was complained of in some parts of the pit.

I think the position of the cupola shaft, near the north-west boundary of the pit, had a tendency to rob the south-east side of air.

Currents of air in pits take the most direct route which is open to them in their return to the surface.

It was in this south-east district of the pit that the explosion occurred.

The evidence shows that the gauzes of the safety lamps used by the men in this district were blued by the heat of the flame.

The presence of the light carburetted hydrogen or fire-damp of mines in the air increases the activity of combustion without producing smoke in the lamp until the proportion of one-fifteenth or $6\frac{1}{2}$ per cent. is reached. Up to this point it causes heat and blues the gauze. When the proportion rises above this the gas begins to explode, and a Stephenson lamp goes out.

The former explosions near Barnsley in this seam of coal, at the Oaks, Darley Main, Lund Hill, and Edmund's Main, were clearly attributable to a bad system of ventilation and to the use of naked lights; but at the Oaks pit, when this explosion occurred, the total amount of ventilation was large, and safety lamps of the best description were used wherever the managers apprehended that any risk would be incurred from naked lights.

I do not think that any of the gas lights in the pit were the cause of this accident.

Gas is the safest of naked lights. These lights are fixed. They cannot, therefore, be carried about. They are easily and immediately extinguished.

There was a naked light, a safety lamp, allowed to remain with the gauze off, at Thompson's box hole, where it was used for relighting the colliers lamps.

Mr. Woodhouse had ordered the gas lights, formerly used at this place, to be removed up the plane to a point 400 yards nearer to the downcast shaft. Neither he nor Mr. Mammatt knew that this safety lamp was allowed to remain open. But I think that even the relighting of safety lamps for the colliers at Thompson's box hole was a dangerous practice.

I do not think that a sufficiently constant supervision was exercised to prevent the occurence and continuance in use of damaged lamps during the hours of working.

The evidence proves that lamps in this state were occasionally brought out to the lamp cabin by the men on leaving their work, which they had kept in use subsequently to their being damaged.

Safety lamps were also intrusted to the care of boys employed as doorkeepers, horse drivers, and hurriers.

The horse drivers and hurriers were allowed to carry their lamps about with them, and it was admitted that these lamps were often broken by being struck against the corves.

The mode in which the lamps were fastened with a screw through the bottom was so imperfect that any one could open them without the possibility of detection.

The exploration of the pit after this explosion was not sufficiently extensive to permit the exact site where it originated or its precise cause to be determined, although it was evident that it must have commenced somewhere in the south-east of the pit.

The No. 2 jinny to the south-west of the downcast shafts was only explored to a distance of about 600 yards, the south level to about 400, the dip ending to its junction with the new level, or about 350 yards from these shafts. The new level could not be penetrated beyond its junction with this ending, or about 250 yards from the engine plane. The engine plane was only examined 150 yards below Thompson's box-hole. The dip south level and the dip slant could not be entered.

If a line be drawn on the plan connecting these points the district within which the greatest violence of the explosion was manifested will be defined.

The overcasts, doors, and stoppings were entirely destroyed through the whole of these south-east parts of the pit. The levels and other roads were obstructed by falls.

The intake air could no longer enter these districts, but turned short back on entering them to the upcast shaft. The after-damp and fire-damp which filled them compelled all who attempted to explore them to return.

There must unquestionably have been at this period standing fires in some of these districts, which caused the subsequent explosions as soon as the fire-damp in them became sufficiently mixed with the intake air to ignite at these fires.

At the period of the explosion the air of a large part of the pit near its south-east boundary must have been highly charged with fire-damp; but whether in the low and falling state of the barometer at this time the numerous goaves in these districts were the sources of this gas, or whether some sudden outburst had anywhere occurred, cannot now be determined.

Nor can it be now known whether the fire-damp ignited at a lamp accidentally or negligently damaged, or whether one of the large and sudden outbursts, to which the pit was liable, backed up against the intake air to the naked light at Thompson's box hole.

In my opinion the explosion most probably occurred from this naked light.

If it had occurred, as suggested by Mr. Woodhouse, through a man falling in his endeavours to escape from one of these sudden outbursts, I think the explorers would after the explosion have seen something of the others who were also escaping at the same time.

Mr. Platts gave very important evidence from his own experience as to the effect on the ventilation produced by one of these sudden violent discharges in the colliery in which he is now engaged.

He said that he had known an outburst of fire-damp to take place in this colliery in such volume and with such violence as to stop the ventilation entirely; that it prevented the air from entering the pit, filled up the workings, and backed up 400 yards in one direction against the intake air.

Mr. Forster said that he had known a discharge of 7,000 or 8,000 cubic feet per minute in a pit under his management.

The intake air which came down the engine plane and the two travelling roads began to split itself again at a point about 50 yards to the rise or west of Thompson's box-hole, where it divided itself into numerous separate currents in the dip north and south levels, the dip slant, and the dip headings.

Any large and violent outburst of gas, either in the dip slant or the dip south level, might therefore back up to the south end of Thompson's box hole (the point from which the force of the explosion appeared to proceed) without having to contend with more than one split of intake air of about 10,000 cubic feet per minute, even if the whole of the air, which under ordinary circumstances entered the particular district in which this outburst may have occurred, continued after it broke out to find its way through it.

I think, however, that the obstacle to the entrance of the intake air created by an outburst of this nature would, in any of these south-east districts, cause this air to pass away into the other channels, which at this point were equally open to it, to reach the cupola shaft, and that a very small portion, if any, of pure air would, during the continuance of such an outburst enter the district in which it had occurred.

If an outburst took place in the dip slant, the position of this district to the deep of the point where the intake air entered it would facilitate this backing up of the fire-damp against the air.

It is evident, therefore, from all the foregoing considerations that in this pit there were periods when the perfect state of every lamp in use throughout a large part of it was the only safeguard against the destruction of all the men employed.

At the same time the condition of the pit, with its 50 miles of open roads, the absence of all secure separation in the ventilation of the various districts, the continuity of all the air channels extending around the external boundary and traversing the interior in every direction, was such that if the volume of gas ignited in any explosion were large the explosion would spread everywhere and involve all the men working in the pit in one common catastrophe.

I consider that the system under which the coal in this pit was being worked was highly dangerous.

No drainage of the fire-damp existing in the measures had taken place by any preliminary drivage or partial working; but as soon as the levels entered the maiden coal in this thick fiery seam it was exhausted by working it out with faces 400 or 500 yards in length, over areas of 20 or 30 acres in extent, in close proximity to each other.

There was no attempt to isolate the different districts. A large explosion might sweep everywhere throughout the pit.

The conditions of the coal measures in this part of England are peculiar. There are two important seams descending regularly toward the east uninterrupted to the deep by faults.

These seams of coal are situated in the strata so far from each other that the working of one of them has no effect in draining the other of fire-damp.

In the north of England and in South Wales, from the much greater contiguity of the numerous workable seams, the working of one drains in a great degree the others.

In the Barnsley Main coal when the depth reached, as at the Oaks pit, is considerable the pressure on the fire-damp contained in the strata is such that it must burst violently from time to time into any large excavations formed by working the seam, and the more violently in proportion to the extent of the excavation.

The only mode of relieving this coal from this great and dangerous pressure, and of rendering these outbursts less in volume when they occur, is by the extensive drivage of levels and strait work prior to the working of the coal; and after this has been effected, by the partial working of the coal before extensive goaves are formed in it.

When, as with this seam, the coal is thick, and when the area to be worked is not very large, it would be better to drive all the levels to the outside boundary, and to commence the working of the coal by bringing it back from that point.

In such a seam a partial working on a narrower system in commencing would be safer than that which has latterly been practised at the Oaks, where goaves of 20 or 30 acres in extent have been formed immediately on the first opening into the seam, following up on the deep wall faces of 400 or 500 yards in length.

As with the most careful and judicious management it is impossible to prevent all accidents from explosion in deep fiery mines, it is necessary to endeavour to limit their effects in the pits in which they occur.

The area of pits is constantly increasing from the increasing depths at which it becomes necessary, from the exhaustion of the seams near the surface, to work coal. The number of shafts applied to the working of any given area must therefore diminish.

If, however, the districts in the interior of extensive mines were securely divided, if there were no communication existing in the ventilation of one district or one level course with another, it is probable that an explosion would be limited in its consequences.

In the Oaks pit, from the open connexion existing everywhere in the airways, this explosion when it occurred swept through it everywhere.

A large additional loss of life occurred at this pit from new explosions subsequent to the first.

The first explosion destroyed all the overcasts except one double invert. Some of these overcasts were repaired to restore the ventilation for the purpose of rendering it possible to re-enter the unexplored districts, which were full of after-damp.

But this restoration of the ventilation, mingled atmospheric air with the fire-damp present in the pit, and brought both into contact with the standing fires which existed in the unexplored part. New explosions consequently resulted and further loss of life.

As soon as it was found that no more lives could be saved, and as soon as the fires in the furnace and at the cupola shaft could be extinguished, the most direct communications possible should have been opened from the downcast shafts to the cupola, and every one withdrawn out of the pit. All the intake air would thus have returned direct from those shafts through the cupola to the surface, and the whole pit would have filled up with after-damp, carbonic acid, and gas, which, not being mingled with atmospheric air, could not explode, thus extinguishing all standing fires.

I have, &c.
J. KENYON BLACKWELL.

The Right Hon. Spencer H. Walpole, M.P.,
&c. &c. &c.,
Whitehall, London.

Proceedings at Inquest before Thomas Taylor, Esquire, Coroner, and the following Jury—Messrs. W. Dodgson, foreman, G. and T. Allen, E. Armitage, W. Arnold, A. Badger, W. Bailey, J. Battison, J. Fox, T. Guest, T. Lingard, J. Mitchell, J. Parker, J. Pigott, C. Robinson

ON THE BODIES OF

JOHN ROBSON, aged 37, deputy; WILLIAM WILSON, 33, deputy; RICHARD HUNT, 29, collier; HENRY JACKSON, 35, collier; JOHN JACKSON, 16, hurrier; WILLIAM ABBOTT, 25, collier; WILLIAM WRIGHT, 30, hurrier; THOMAS HARDCASTLE, 39, pit bottom man; JOSEPH SENIOR, 12, pit bottom lad; WILLIAM BATES, 14, switch lad; JOHN WALMSLEY, 16, horse driver; JAMES WALMSLEY, 13, horse driver; JOHN HENRY McQUE, 12, lamp cleaner.

EVIDENCE.

SARAH ROBSON.—14*th December*, 1866.

I am the widow of John Robson. My husband was brought home about 4 on Wednesday afternoon last. He was burnt on his shoulders, arms, and face. He was quite conscious all yesterday. He said he was about eight yards from the bottom of the shaft when the explosion happened. He said the first thing he saw was a blaze of fire and dust, which came about him and knocked him down, and he could not tell anything more. He died at half-past 4 this morning.

ELIZABETH HILTON.

William Wilson was my son-in-law. He was brought home on Wednesday afternoon. He was burnt all over, and his left wrist was broken. He said he was blown into a place and got quite fast. He died at 8 this morning.

MARY HUNT.

I am the widow of Richard Hunt. He was working in the new stone drift. He left home ¼ before 6 on Wednesday morning. He was brought back dead about 5 in the evening. He was burnt on the face and on one arm and hand.

JANE JACKSON.

I am the widow of Henry Jackson. My children brought the boy called John Jackson home about 3 years ago. He was destitute and we took him in. My husband, my son William, and the boy went to the pit about half-past 4 on Wednesday morning. They brought my husband home about 7 yesterday morning, and the boy at 9. They were dead. My son is still in the pit.

My husband was burnt. The boy had his neck and left shoulder broken. He was not burnt.

ISABELLA ABBOTT.

I am the widow of William Abbott. He left home on Wednesday morning about half-past 5, and was brought back dead at 8 on Thursday morning. He was not burnt nor bruised.

EMMA WRIGHT.

I am the widow of William Wright. He was hurrier for William Abbott. He left home on Wednesday morning about half-past 5. He was brought back on Thursday morning with Abbott. His face and body were burnt.

THOMAS BEXON.

I am a collier. I was at the "White Bear," at Hoyle Mill on Wednesday afternoon between 4 and 5. I saw Thomas Hardcastle brought there. No one had owned him. They took him in, and I stopped with him all night till 7 in the morning. He could not speak for two or three hours, but afterwards he told me his name, but could not say how he was hurt. He was living when I left him.

ELIZA HARDCASTLE.

I am the widow of Thomas Hardcastle. I found him at the "White Bear" on Wednesday about 6 in the evening. I stopped with him till 12. I went again the next morning between 8 and 9. He was able to talk to me. He asked to go home, and I fetched a cab and took him. The doctor permitted him to go. He died on the way home. He was burnt all over.

RICHARD MOONEY.

I am a weaver. I am step-father of Joseph Senior. He left home about 10 minutes to 5 on Wednesday morning. He was brought back about 5 in the afternoon. I did not see him taken out of the pit, but they said he lived a few minutes after he was brought out. His left arm was broken and his head cut. He was very badly burnt all over except his feet.

SARAH BATES.

I am the widow of Philip Bates. My husband was a collier and is still in the pit. On Wednesday morning my husband went to the pit first, my son later, at about a quarter past 5. My son was brought back dead about 9 yesterday morning. His side was burnt and his face bruised.

JAMES MYERS.

I am a collier. I saw James Walmsley at the joiner's shop about half-past 2 on Thursday morning. He was living I saw John Walmsley about the same time. He was dead. James was burnt about the back, face and legs. I took him home and nursed him. He died about half-past 11 last night. John was not burnt or bruised, but suffocated.

ANN BAND.

I am the widow of Joseph Band. Thomas Band was my son. He left home about 5 on Wednesday morning and was brought back dead early on Thursday morning. His face and arms were burnt.

ELIZA McQUE.

I am the widow of John McQue. John Henry McQue was my son. He went to work on Wednesday morning at 5. I brought him home in my arms in a cab at 5 on the same evening. He said he heard the explosion, and made the best of his way to the pit bottom, but could not get into the cage, and fell twice and his head was cut. He said he did not know how he got out. He was only burnt a little on his arms, hands, and head. He died about half-past 3 this morning.

JOSEPH ORGILL CARR.—*15th January*, 1867.

EVIDENCE AS TO EXPLOSION.

I live at Worsborough Dale ; I am cashier at the Oaks colliery.

I was at the canal when the explosion occurred. I was about 30 yards from the upcast or cupola shaft. The time was as near as I can tell 10 minutes or a quarter past one on the 12th December. I could not see the downcast shafts, but only the upcast, where I was standing.

There was a great rush, but not so loud a report as I have heard from explosions.

The sound was very deep, dull, and monotonous ; and a large column of very dense black smoke shot straight up about 30 yards from the upcast.

The straight rush upward did not last long ; it speedily changed into a horizontal cloud. Immediately on coming out of the top of the shaft it took the direction of the Grange. There was a little wind, and that seemed to blow it in a horizontal position.

There was a very little discharge of anything but smoke. A little coal dust and patches of soot were scattered about.

I saw no fire or sparks come out of the upcast shaft. I went to several of the lumps of soot ; I found they were not on fire. I also examined some very small chips of wood which had fallen ; some of them seemed to be charred, others were not.

I went immediately for David Tewart, and then to the downcast shafts as quickly as possible.

When I arrived on the pit hill I found that the flags were strewed with small coal dust. Both shafts were upcasting very light smoke, but not rapidly. There was a very strong smell of fire.

I could not see the upcast shaft from the pit hill, so that I could not compare what was being emitted by the downcast shafts and by the upcast at the same time during any part of my observations.

It was not long before the upcast current in the downcast shafts changed again. As near as I can judge these downcast shafts continued to upcast for about 20 minutes after I first saw the explosion when I was standing by the canal.

CHARLES CROSSLEY.—*8th January* 1867.

I live at Barnsley. I am banksman at the Oaks colliery.

I was at the colliery on the 12th of December. When the explosion took place I was just going off the pit hill. It was a quarter past 1 in the afternoon.

As I was going off the hill I heard a rushing noise. I looked behind and saw the smoke flying up. It was coming up both the No. 1 and the No. 2 downcast shafts.

There was no damage done at the pit top. The pit head gearing was standing good. There was smoke ; slack and soot were strewed about.

I went back to the pit mouth directly, and sent for assistance. Mr. Dymond was the first on the ground.

At the time of the explosion the engine was running ; the No. 1 cage was going down and the No. 2 cage coming up loaded. The No. 2 cage broke loose with the explosion.

I found that the engineman had stopped the engine. The No. 1 rope was fast in the shaft. We took the No. 2 rope off, and drew up the No. 1 rope.

The No. 1 cage was found to be broken. It was taken off and a fresh one put on. In about half an hour we drew the No. 2 rope up. The coupling chain was broken and the cage had left it.

It occupied us, I think, nearly two hours, though I may be mistaken in this, to take the No. 2 rope off, and to get the No. 1 in working order for any one to go down.

The first persons who went down were Mr. Dymond, David Tewart, William Sugden, and Christopher Siddons. I think it was about 3 when they went down, but I cannot say exactly.

The next who went down were, I believe, Robert Cadman, Charles Sugden, Matthew Haigh, and Thomas Nayden.

I cannot recollect the names of those who went down after that.

After the third or fourth draw they began to bring the men out of the pit.

WILLIAM YOULE.—*7th January* 1867.

I live at Ardsley.

I have been a lamp cleaner at the Oaks colliery 12 years last October.

My station was in the lamp cabin between the two downcast shafts.

I was in the pit on the 12th December. Richard Hunt and John Clayton, the men at work on that day in the new stone drift, after getting their dinners in the lamp cabin, asked me if I would go down in a few minutes and give a stroke or two to the drill while John Robson and Hunt went round to listen if they could hear it through.

After giving a few strokes I waited until Robson and Hunt came back. They had been down the steps to listen. Hunt said it sounded as if it was nearly through.

Robson and I measured the drift with a tape to see how long it was. It was a little under three tapes. There are 22 yards in a tape. Hunt said to Clayton, "Draw out, we will charge."

I then went away into the lamp cabin about my business. I had to prepare for lighting the gas lamps that were blown out when the shots went off.

I could not speak to any time, but it might be 15 or 20 minutes before the shot was fired.

I was getting a safety lamp ready to go and light these gas lights when I heard the report of this shot. I was running across the lamp cabin, and when I got to the door there was the pit bottom full of flame.

I tried to fight myself out of the flame, when I heard a loud report, like the cage falling down the shaft into the bottom, and then I do not remember any more till I came to myself somewhere about the lamp cabin door. I think I was part in and part out. It was where I was fighting with the flame.

As soon as the No. 1 cage came down, I jumped on to it, and got up the first draw.

I was so badly burnt I did not go down again.

The gas lights, which were blown out were those fixed from the pit bottom to the engine plane head and a short distance on the south level.

The shots very often blew my lamps out in the lamp cabin.

This shot did not sound very different from others, only a little louder.

I heard the shot, and then I heard a loud report when I was fighting with the fire. I thought it was a cage falling down the pit.

I was in the fire and the cage fell directly.

Every man who worked in the Oaks pit used to come every day to my lamp cabin when coming out and deliver his lamp in.

I examined each lamp, and reported if I found anything wrong.

If damaged lamps were taken in to another lighting station they were sent up to me.

Damaged lamps were not, however, often brought up to me. Sometimes I had not one to report for some weeks, at other times I had a couple in a week to report.

There were about 431 lamps, and about 400 were in work. It was seldom that damaged lamps were brought to me to be repaired ; but 20 or 30 were sometimes brought during the forenoon from different districts to relight. They were brought to my cabin from the south level and the new level.

If it were an unlucky day 40 lamps might be brought to relight before I began to take them in from the men as they left the pit in the afternoon.

There was no repairing done except at my cabin. When a lamp was damaged it was brought to me.

The other two stations for lighting were one near the stables in the top pass-by level, 400 yards, and the other at Thompson's box hole, 800 yards down the engine plane.

There were no gas lights put out further than about 80 yards from the pit bottom on the engine plane head. The others, below, were never put out by the shots.

These are some of the damaged lamps (*handing some lamps in*).

This one has been damaged by a pick. It has been done a year or two, but I cannot tell the number of the collier it belonged to.

I remember also taking this other in. I remember it particularly, because it was a new gauze. The collier's number to whom it belonged was 78. I believe his name was John Bates. I told him it was a pity he should strike a lamp in that way the first time of its being used. The man said he was very sorry; he had struck his pick through it.

Charles Randison damaged his lamp on the 11th December, the day before the explosion. He went on to work at 1 in the afternoon that week. He had come out on the night of the 11th about 10. I found Randison's lamp in the lamp cabin when I came down at 6 on the morning of the 12th. It was hung on one side as a damaged lamp.

The lamp cleaners at night hang up such lamps on one side as damaged, to be examined before being sent out again.

I took Randison's lamp to pieces and found the glass and a wire or two in the gauze broken. I put it on one side. When Randison came down at 1, just before the explosion, I showed him the damaged lamp. He said it had fallen off a nail where he worked on to the floor, and if there was a damaged place in the gauze it must have fallen on a pick or something sharp. I said I have reported it to the manager.

I have once or twice this last twelve months, since the strike, found one or two lamps unlocked.

There was a safety lamp at Thompson's box hole which was kept open all day for the purpose of lighting lamps. The top of this lamp was kept off.

I was down at that lamp station on the Monday before the explosion. The lamp was then open; the gauze was off and the bottom was placed on a block of wood for the men to relight their lamps by.

This was at Thompson's box hole, or the 800 yards station.

17*th January.*

There were 21 gas lights near the pit bottom from the top of the engine plane head to the south level pass-by.

Two of these 21 lights were in the back way, or empty corfe road and three in the main south level or horse road for full corves.

The farthest of these lamps from the pit bottom was that on the main horse road of the south level, rather more than half way between the No. 1 pit shaft and the stables.

The shots usually blew all these gas lights out, but sometimes, although seldom, they left the three in on the right hand side of the engine plane going down.

They always blew all the lights out on the south level.

The waft of the cages very often blew out the lights round the pit shafts.

I used to hang a safety lamp up in such a manner that when a gas light was wafted out the lamp lit it again.

The shots never blew out any of the gas lights on the engine plane near the top pass-by. There were five of these lights.

The Stephenson lamps were locked or fastened underneath with a screw. I never knew any of these locks to have been picked; at least I have never known any man proved to have picked one.

There was a complaint about a man smoking in the pit. He was sent to prison for three months. It was while Mr. Minto was manager.

If any man or lad had got a key he would have no difficulty in opening his lamp; and if he had again screwed it fast I could not have detected it. I had no private way of fastening them. The men saw us unlock them and all we did to them.

A round bit of wire about the thickness of a nail would open the lamps. A strong nail cut with a nick in it would also do; at least I could open them so.

SMITH BATES.—7*th January,* 1867.

I live at Worsborough Common. I am a collier, working at the Oaks colliery.

I was working on the 12th of December in the new level.

I went down about half-past 5 in the morning. I was leaving the pit at a quarter to 1.

When I got to the lamp cabin William Youle, the lampkeeper, told me to come in; they were going to fire a shot directly; so I went in.

When I had been about ten minutes in the cabin Richard Hunt came to the door. He said they were going to fire the shot, and Youle lighted his lamp and stood waiting for the shot to go off.

The fire was on the top of me in two or three seconds after I heard the shot. I heard nothing after. It took my senses away and knocked me down. I saw nothing but the place all in flames after the shot had gone.

The shot sounded very dead; it sounded similarly to blowing through to some works somewhere.

The blast came from the top of the engine plane.

I have worked two years in the Oaks pit this time.

I was short of air in my bank.

I often found fire-damp in it. There was some in it on the day the explosion happened. I do not know where it came from; it was there; the chock was marked "fire" by our fireman. It was there when I went in on the morning, and it was there all day till I went out.

There was gas where I worked all that day, and many a day before; it was lying in the goaves where we used to get the stone for packing. It was behind, opposite the face of the working.

I had to go into the goaf to fetch stone out for packing.

When I went in I left my lamp hung on the chock. I was not allowed to take it in.

The gas lies up above. I did not go far into it. The farther I got in, the stronger it was. It stopped me from going in. When you get into it it will weaken you and get you down. It will affect your eyes and take your breath.

I never used to take any notice of fire-damp being behind me in the goaf. They allowed me to work when it was behind me. It did not extend to the face. There was no gas where I worked.

Robert Cadman was the fireman in my district. Christopher Siddons was the deputy on duty that morning.

I had seen "fire" marked on a chock. That was put up by Cadman.

I knew of the deputation of the 30th of November.

I saw Siddons on the day of the explosion. I made no complaint. He told me to leave a man hole to clear the gas out; and so I did.

ROBERT THOMPSON.—7*th January* 1867.

I live at Monk Bretton. I am a collier.

I have worked about 13 years at the Oaks colliery.

The coals from my bank were drawn up into the south level. Cadman was our fireman.

I was at the pit bottom in the lamp cabin when the explosion took place.

I had finished about half an hour before, and had come to the pit bottom to go out.

I took my lamp in to Youle. He said they had gone to light a shot, and told me to come into the cabin.

I had been there three or four minutes when I heard the shot.

I had heard many of these shots before. This did not sound so loud as the others did.

As soon as ever the sound of the shot came into my head, flame and fire came and knocked me down.

I was drawn up after that.

I was blind when I got out.

There was gas in the goaf behind my bank. I never saw it in the working face of the bank. The goaf lies behind the chocks. The face is the regular working place, and the goaf is the working place occasionally.

I know whem it becomes dangerous to work, by the gas putting the lamps out. The lamps went out occasionally. My lamp went out every time that I put it up at the chock. I was told by Christopher Siddons, the deputy, to keep it off, and of course after that I kept it off.

The air against the face was fit to work in. I was right enough when I was at the face of my working.

There has always been gas in the goaf beyond the chocks ever since the starting of the place. It was sometimes less and sometimes more.

The gas came down at times so far as to lie between the chocks. We had to work in it to draw the chocks and to build the packs. At times it was very long before the roof fell, and we had something to do to make it break.

When the roof broke down there was more gas in. The longer it hung, and the larger the fall, the more gas came down with it.

The roof might be a long time breaking, or it might come down suddenly. When it broke down it sometimes forced the gas out upon us right up to the face of the coal and put out the lamps. It has sometimes been better and sometimes worse.

There was plenty of fire-damp in my place on the day of the explosion.

We got the stones to build our packs out of the goaf. To get the stone we had to go into the gas. I used to hang my lamp on the outside.

My brother worked with me. He was at home on the day the explosion happened.

I was coming out that day about 1, rather earlier than usual.

The gas was strong enough to fire in the goaf. It was sometimes so strong when I went in that I was forced to come out. I complained about it to Siddons. He came round about 9 on the day of the explosion. He told me to keep my lamp down. When he said this, I told him there was plenty of gas in the goaf. My lamp at that time was hung by the corf on the road.

I saw the fire very soon after the shot went off. Sooner than you could say "one."

When the shot went off the fire came and knocked me down, and then I heard another report afterwards. It was a bigger noise than a shot.

Henry Marshall (boy), *7th January* 1867.

I live in Barnsley. I am a lamp carrier.

I worked in the Oaks pit; I was in it on the day of the explosion. I worked under William Youle.

I had been to the lamp cabin to get some more lamps and I was going back again to the new level.

There was something that came all of a sudden and I felt it. I remember nothing after that. I do not know whereabout I was in the pit. When I came to myself I was at home.

George Tasker.—*8th January* 1867.

I live at Barnsley. I was one of the furnace men in the Oaks pit.

I have been working there about four years.

There are two other furnace men besides myself, but only one works at a time. There are three shifts in the 24 hours.

I relieved John Bentley on the 12th of December, the day of the explosion.

It was about 20 minutes before 1 in the afternoon when I got to the furnace. The fires were all right as usual. I found nothing different to what I generally used to do. Bentley did not leave the furnace till I got to it.

I was there about 40 minutes before the pit exploded. I heard something like doors falling. I turned my head to see what it was. I felt a rush, and it knocked me down on the flags. When I had been down about half a minute, I felt a heat come over my neck and my hands. I went to sleep then. That is the last time I remember.

When I came to myself I was coming up the shaft in the cage.

The rush which knocked me down came from the downcast pit bottom.

The fires are clinkered between 5 and 6 in the morning, and they are cleaned in the afternoon. There is nothing done to them again till the next morning.

At 1 in the afternoon we let one fire down for cleaning. We clean it and keep the other up till the the first is got up again. We then clean the other. It takes two hours to clean one of the fires and to get it up fully again.

John Bentley.—*29th January* 1867.

I live at Barnsley. I was one of the furnace men in the Oaks pit.

I have been working there nearly 20 years.

I was on the forenoon shift on the 12th of December, the day of the explosion. It was 1 in the afternoon on that day when I got out.

The fires were in good order when I left. I had never seen them burn better.

If I did not fire well it was soon felt in the pit, and some one of the deputies would come and see what was the reason, and whether anything was the matter at the furnace.

Robert Cadman.—*7th January* 1867.

I live at Hoyle Mill. I am a night fireman at the Oaks pit.

I have worked there 10 years, six years of these as fireman.

I was down the pit on the night of Tuesday, the 11th of December; I went down at 8.

Matthew Haigh and William Wilson were the other firemen who were down that night. Wilson is dead.

My districts were the south level from the pit bottom with No. 2 jinny, and the new level about 200 yards down the engine plane.

I examined all the working places and the airways with the Stephenson safety lamp.

In the new level, out of 14 long banks, there were about six banks with gas in. There were some that had middling in, and some that had much in.

In the bank faces they were all in good working order.

When I found gas in the banks I wrote "fire" in capital letters on the chocks.

It was 4 on the morning of the 12th of December when I got back to the lamp cabin at the pit bottom.

I used to report to Christopher Siddons. He entered my report in a book kept in the cabin.

He was the deputy that had the same districts for the day that I had for the night.

He usually came down at a quarter before 5 in the morning. I had to wait for him.

Robert and John Thompson worked in the top bank in the range of banks in the new level in my district.

There was gas in Bates' bank. His bank was also on the new level.

According to the rules no person is allowed to descend the pit in the morning except the officers of the pit, the hanger on, the furnace man, and the horse keeper until a signal is given.

We used to hang corves on every morning as a signal for the men to come down.

Wilson and I hung them on the morning of the explosion.

Wilson and Haigh had come to report before they were hung on.

The banks I had visited during the night were safe to work in. There was only gas in the goaves.

If I had reported them unsafe the lamps would have been stopped at the pit bottom.

Wilson was on double shift.

The quantity of gas which I found on the morning of the explosion was about the same as I generally found in the mine.

The gas lies behind the chocks in the goaf, where the men go to draw out the stones for the packs. They have to go into it, but they have not to take their lamps in. It is part of their work.

The position of the gas varies a good deal. It may be very much lower down in the course of an hour than it was an hour previous.

Sometimes the corves going into the face will alter the position of the gas. A fall of the roof may push it out. I have known a fall to drive it out while I have been going round.

8*th January* 1867.

I went down in the second draw after the explosion.

Mr. Dymond, David Tewart, and Christopher Siddons went down in the first draw. Of these, Tewart and Siddons are dead.

I went down with Thomas Nayden and another. I do not recollect who he was. Thomas Nayden is dead.

It was about 2 in the afternoon when we went down; but I cannot tell the time exactly.

The men we found at the pit bottom were burnt.

I put Henry Brook, George Borrowdale, and William Youle on the first cage. Smith Bates was brought out on the second with the lad Marshall.

There were two men behind No. 2 cage, which had fallen down the shaft. I drew them out. One was dead, and the other almost dead.

I then went to the top of the new stone drift. I found one man lying dead just at the top end of the drift, between it and the engine plane. He was badly burnt.

William Charlesworth joined me there.

We then went up into the pulley chamber, where the ropes pass into the plane. We found Joseph Keightley there, alive, but he was all on fire.

There was some coal dust there on fire under some boarding. We put it out.

This pulley chamber was open to the shaft at the one end, and to the engine plane on the other.

We found that the ends of the plane ropes had been blown into the pulleys in the chamber.

Siddons then called me into the south level, to the stables about 100 yards along the level. When I got there I found the straw was on fire. We put it out.

There was a lad and a horse lying dead near the stables at the bottom of No. 2 jinny. I cannot say whether the lad was burnt, but he was black enough.

There were empty corves there, which the lad was driving in. They had been knocked all about.

I went to No. 3 board gate. I found the wind was going up it, so I put a fast sheet up there; then to No. 4, where I put a sheet up; and then to No. 6, opposite the sixth endings. I could not get any further for after-damp. I then returned to the stables.

Three-fourths of this south level were timbered. The timber was all blown out, and in part covered with stone fallen from the roof. There were large falls 30 yards in length.

From the stables I turned back again to the sixth ending with some gentlemen.

When I returned the second time to the stables Tewart ordered me to go up No. 2 jinny with Siddons. I went up to the pass-by. Siddons went up to the overcast beyond. I then returned to the pit bottom.

The timber was all blown out in No. 2 jinny, and there were falls there four or five yards in height.

I afterwards went up out of the pit.

I was not absent above three-quarters of an hour.

I went down again about 8 at night.

Tewart was in the bottom, and sent four men with me on the south level.

There were two sets of pairs of doors in that level before reaching the sixth endings. The frames of the pair next the pit bottom were standing.

Everything else was blown away.

I put fast sheets up in the place of both pairs.

Then I went about 60 yards down the sixth ending to a stopping. This stopping was standing good there.

Then I went into the main south level, beyond the sixth ending towards the far end of the level.

I found a stopping gone there, between the intake and the return. The return air was coming out into the intake. I put a sheet up there.

After this I cannot tell any more. I became affected by the after-damp. They got me out, and I found myself in the cabin on the pit bank about 4 in the morning.

I was just getting ready to go down again when the pit exploded a second time.

Matthew Haigh, 7*th January* 1867.

I live at Barnsley. I have been night fireman for the last eight months in the Oaks colliery.

Altogether I have worked there for about 24 or 25 years. I went down the pit on the 11th of December at 6 in the evening.

My district was on the north side of the engine plane. I looked to the night men and also examined the workings for the day shift.

I found gas on the night before the explosion in four working places. The gas was in the goaves in three out of the four places; the other was in a strait work place.

I warned the men of it by writing "fire" on their chocks. In one place I put a stone near the goaf and wrote on the stone, "Be very careful; there is fire."

I found less gas that night than I had found many times before. In one place it was about 3½ yards behind the face. It was all in one goaf. It would have put my lamp out in three places out of the four if I had gone far enough into it. Of course when I perceived the danger I ordered the men to keep their lamps out of that goaf.

There was very little in the strait work. It would not fire in the lamp. It only drew the blaze a little.

I reported this to John Robson, the deputy on the day shift. I reported it to him verbally.

I went to the pit as soon as I heard of the explosion. I saw Mr. Dymond, David Tewart, and Christopher Siddons go down in the first draw.

In the next Robert Cadman, Thomas Nayden, and William Sugden went down.

I went to prepare a few lamps, and then I went down at about a quarter to 3.

Thomas Cartwright and Charles Sugden went down with me in the same draw. It was about the fourth.

When we got to the bottom they handed us some men dead and alive, but all badly burnt.

Two of us came up with the men they gave us. I came up four times.

They gave them to us just as they came to them. If they had not one that was alive, they gave us a dead body with one that was alive.

After we had brought up all that were at the bottom, Cartwright and I heard a man crying out. We found it was William Wilson. We brought him to the pit bottom. His clothes were burnt. His hands and face were badly burned too. We found Wilson on the engine plane at the top of the steps behind the corves.

I saw three bodies of men dead lying between the pit bottom and the steps.

I then went to the stables at the top pass-by, 400 yards down from the pit bottom, to see if there was anything on fire there. I found no fire but everything dead.

There were two men dead at the top pass-by. There were two horses and three donkeys dead in the stables. Mark Lee, the hanger-on at the top pass-by, was lying dead in the place where he got out of the way of the trains.

All these bodies were slightly burned. They were knocked about badly by the blast.

In going I went straight down the engine plane. There was a large body of stone and the arch blown down at the new level end. The arch was down again about 30 yards lower, and there was another large fall of roof there.

At the top pass-by there was a large body of stone down again and the bars were blown out. A large wooden cistern near the top pass-by to supply the horses with water was blown from its place. I did not see it. It was carried entirely away.

Everything had been carried towards the working places with the intake air.

I returned from the top pass-by up the back travelling road, on the north side of the engine plane, and went up the steps. Tewart then sent me back with some waste to try and stop up the gas pipes. The gas lights had been blown away, and I could not find the pipes.

We then went on again to the top pass-by, and to the bottom of Jones' jinny. There were five men with me at that time.

Three of these men remained at the bottom of Jones' jinny, and found two boys and a donkey dead there.

We went on by the return aircourse from the bottom of Jones' jinny to try to get a man out named Jabez Ryder. He worked not very far from the cupola shaft, about 130 yards to the dip.

We got 180 yards from the bottom of Jones' jinny. We found a fall of roof here which nearly closed the gate up. We then returned to the downcast pit bottom the same way that we had gone.

The after-damp was bad in the return aircourse up which we went towards the cupola. We felt it very little till we got to Jones' jinny.

The door at the bottom of Jones' jinny, between the return aircourse and the intake, was blown down. The intake air turned into the returns there instead of going forward up the jinny. I could not find any part of this door.

There were two sheets on the returns above the door. They were driven about 20 yards towards the face.

We then returned to the pit bottom and I came out.

I was almost insensible by this time from fatigue and after-damp.

I went home, for I was very ill. I went to bed, but did not sleep.

I rose at 4 on Thursday morning and went down the pit again.

When I got down I went to the dip north level, 800 yards from the pit bottom.

I found many dead bodies in the dip north level. They were not at all burnt; but some of them were fractured by the explosion. Some of them were just as they had been working. Others had put their clothes on.

We brought the bodies away as fast as we could. I stayed there while all of them that were within sight were removed.

We then began to prepare two sheets to put up to get further into the workings.

I then found the air turn on us and revolt again. It sucked backwards and forwards, three several times. When we felt the third suck come, it was stronger than the first.

I am one of the survivors of the last explosion at the Oaks colliery 23 years ago.

Sugden, the deputy, was with me. We ordered the men to fall back; the air was so bad, it brought the deadly gas upon us. I told every one to do the best they could for themselves.

Sugden and I remained. I got in a pump hole, expecting an explosion every moment. In about two minutes the air became steady again. We then started for the pit bottom.

I reported what I had felt to Tewart, and then I came out. In about eight or ten minutes after I got out there was a severe explosion.

The time was about five minutes to 9.

I have found that the gas in the goaves lowers and rises according to the atmosphere. It is often driven forwards towards the face by falls of the roof, which at times commence very suddenly.

On the north side of the engine plane, which was the only part of the pit I went into after the explosion, the things which had been carried away had all gone with the intake air.

The farthest distance to which I got was about 100 yards beyond the stone drift in the dip north level.

I did not see that the things had been much blown about at the top of the engine plane. The corves there were standing in their places, but some of them were blown off the road. The blast had been very severe at the pit bottom, but not so severe as it had been down the engine plane.

I have often seen falls of dirt on the steps from the top and from the sides.

The men who worked in the new stone drift could not have been at work on the steps on the night before the explosion, because I had the key that locked the gate at the top of the steps, and no one could go through without my presence. Each deputy had a key.

It was an iron gate, but open as far as the air was concerned.

There were a pair of doors leading into the south-east returns at the bottom of the steps.

Between 6 and 7 on Wednesday evening I saw the outside door next the intake broken open by Henry Hinchcliffe, George Frost, and a gentleman whom I did not know.

I am sure that it had not been blown down by the explosion and replaced.

The inside door next the return airway was blown away. I could not see any thing of it. It was gone altogether. It was not blown towards the outside door or else we should have seen it on getting through that door.

On Wednesday afternoon, before going to the top pass-by stables, I went into the new stone drift with Cartwright.

I saw two sets of clothes in a tub, a powder can with about four pounds of powder in it, and part of a ring of fuse not very far from the face of the drift.

We found no one alive there, nor any dead bodies.

8th January 1867.

The corves blown off the road at the top of the engine plane were empty. They were at the top of the steps.

When I went down to the top pass-by stables the intake air was going straight down the plane, and also down the steps. It was not going down quite so strong as before the explosion, still it was going down strongly.

The first fall in the engine plane after I left the pit bottom was at the new level end. An arch end was blown down in the new level end, and there was dirt down with it.

The timber which was blown down was just below the arch end.

There was good air coming down the back travelling road when I returned to the pit bottom about 4 in the afternoon of the 12th of December.

If the doors at the foot of the steps leading to the returns had been open at this time, I could not have found so large a quantity of air coming down in the back travelling road as I did.

William Charlesworth.—*8th January* 1867.

I live at Barnsley. I am a collier.

I have been a deputy during the last seven years; for about a year at the Oaks pit, and since I left that colliery at Wombwell Main.

I got to the Oaks on the 12th of December about 2 in the afternoon.

Mr. Dymond, David Tewart, William Sugden, Robert Cadman, Matthew Haigh, and many more were there.

I went down in the third draw with William Sugden and Thomas Nayden. Nayden and Sugden had been down before, and had come up again to bring out some men.

When I got down I found there was only one lamp lighted there, which Tewart had. There were no lamps nor any lamp keys to be had on the top when we came down.

We felt about, going by the cries we heard, and got out those we could find.

I sent some lamps up which I found on a bench

They were sent down again lighted in about 10 minutes.

Hearing a cry at the top of the engine plane, Cadman and I went there and found Joseph Keightley. I got him down out of the pulley chamber, took him to the bottom, and put him on the cage.

Tewart then sent Sugden and me to the cupola shaft.

In the end of the north level, about 10 yards from the No. 1 shaft, we found a little boy lying on his face alive under the traces of a dead pony. I lifted him up.

A little further on I found a door, between the intake and return aircourse, which was blown completely out. I did not see the door, but I saw the bricks scattered all about. They were blown towards the bottom. This door was 20 or 25 yards from the No. 1 shaft, between the north return and the fresh air that goes on the north level to the furnace.

Nayden afterwards afterwards joined Sugden and me in the level.

We found the furnace-man Tasker standing with a sprag in his hand about 15 yards from the far end of the furnace drift.

We spoke to him and took him back with us to the furnace. We then pulled out the fires that were left on the furnace grates. There was a little fire on No. 1 grate, and fire all round on the No. 2 grate, but none in the middle. We put it out as well as we could, but we had no water.

There are two pairs of slide doors in the drift in front of the furnace. They were blown off the runners away from the furnace toward the downcast shafts.

We then went down the steps a few yards from the furnace which lead to the returns. There had been a pair of doors there. The first door was standing. I opened it without difficulty and went through it. The other, the inside door, which had been locked, was blown down. I could not see where it was gone to.

We went into these returns to see how the air was there. We could not stand it at all. It would have put my light out.

We then returned to the pit bottom and brought the furnace-man with us.

10*th January.*

After we had reported to Tewart he sent Sugden and me to the upcast or cupola shaft.

We found two doors there leading from the old north level to the cupola pit bottom. These doors were 10 to 15 yards from the shaft bottom. The first door next the intake was shut. It did not appear to have been disturbed at all. The second door next the returns was down, but the frame was standing, and the door itself was there.

There was another door in the other branch of this north level which was also blown down. It had been blown towards the downcast pit bottom against the intake air. It is a door, I believe, that had been scaled, not shut close. This door was blown down. It was lying there, close to where it had been hanging. The frame was standing in its place.

These doors which were blown down were not broken.

We found some fire in the upcast pit bottom. It was soot and dust, I suppose, out of the furnace drift end that had fallen down into the bottom of the cupola shaft. I went and put it out, but I almost got finished. I came tumbling back again.

I got in the fresh air in the level and I recovered. I then returned to the bottom of the cupola shaft, and some more burning soot fell down. Sugden went and put this out.

It appeared to be coming out of the drift end from the furnace. It was part soot and part dust. It came down in balls as big as my two hands, all on fire.

I went and put this out myself, and also looked up the shaft. I could see something red hot hanging 30 or 40 yards up it. We had not any means of putting that out.

We then set the two doors up again in the north level which I have mentioned as having been blown down.

After this we came back direct to the downcast pit.

Note.—The witness then recapitulated all the doors he had spoken of in his two examinations, viz., one pair in the north level near the downcast shaft; one pair of sliding doors in the furnace drift; one pair down the steps between the furnace drift and the returns; one pair in the end of the north level near the cupola shaft; and one door (Mr. Mammatt said one pair) in the other branch of the north level, within a few yards of the last pair, also near the cupola shaft.

Tewart then sent Sugden and me down the dip ending south of the engine plane to see whether the overcast there was standing or blown down. We went 40 or 50 yards down the ending, but the road was in. There was a lot of bars and stone down, and we came back again.

We then went down the steps, and down the travelling road north of the engine plane to a board gate about 100 yards from the bottom of the steps. We went up the board to see if we could reach the overcast which we had tried to get to by the dip ending. We went under an overcast by which the south-east returns pass over the board. This overcast was standing. We went forward into the ending to the other overcast which we had just tried to reach. We found it blown down when we got to it.

We then began to get this overcast up again. We got the side walls up ready for the covering, but we had none.

We went up the ending over the fallen stuff to seek some covering.

There was a great deal of after-damp there, and we were getting exhausted.

We met some fresh men coming in. I believe they went down and finished the overcast.

We went on to the pit bottom, and I came out of the pit.

I was much exhausted. It was 20 minutes past 2 when I went down. It was nearly 7 when I came out. I stopped out till half-past 8 on the same evening, when I went down again.

The first thing I did was to help to make as good a road as possible over the fallen stuff in the dip ending. I then went out of the dip ending and down the board gate into the travelling road north of the engine plane, and down this to the top pass-by.

At old Mark Lee's station on the engine plane there was a bridge over the plane. It had been blown down against the low corner. It had gone in the direction of the intake air.

While I was at this place several gentlemen I did not know came down the engine plane. I went with them down the travelling road.

At 100 or 200 yards below the top pass-by we found a man dead, lying on his back. He was burned. He was dressed and appeared to have been coming out. He was a long way from his place of work. I recognized him to be a man named Sloane. As I had known him I helped to bring the body to the pit bottom, and came out with it. I did not go down any more.

Sloane had told me that he worked in the dip south level, and that he was driving that level.

I had not been in the Oaks pit before the explosion since I left it, about six years ago. I worked there for about five years; first as a miner, and afterwards as a deputy.

I never liked a pit better in my life, both for ventilation and everything, than the Oaks pit at the time I left it.

I did not observe anything which had been burnt in any part of the pit which I visited until I came to the body of Sloane, 100 or 200 yards below the top pass-by, but everything was everwhere very black and dusty.

There was a dead horse just below the top pass-by, with one of its legs blown off, I did not notice whether it was burned or not, When I left the Oaks pit about six years ago the workings were not so extensive as they are now.

There was a little gas at that time in some of the goaves on the north side of the engine plane towards the cupola shaft; and also in some of those on the south side of the plane.

Sometimes this gas would be within two or three yards of the chocks; at others it would be from 10 to 15 yards distant. Sometimes it was too far down the goaf to be safe to go to it. It varied much.

I have worked in the Barnsley Main coal more than 30 years. I have gone through all grades from a trapper up to a deputy.

It is an impossibility to get rid of all the gas out of the goaves in this seam of coal unless you make a separate shaft for every man.

In the other collieries around the goaves are full of gas in the same way as has been described in the Oaks pit.

Provided there is no naked light, and a man keeps his lamp where he is ordered to do, it is possible for it to be safe as far as that goes.

Wherever I have been if there was a heavy fall in the goaf a man was always ordered to keep away from his place.

Thomas Cartwright.—*7th January* 1867.

I live at Barnsley. I am a pit sinker.

I left the Oaks pit about seven weeks before the explosion.

I went down the pit on the afternoon of the day it occurred with Matthew Haigh and Charles Sugden.

About 10 minutes after I got down we went into the new stone drift.

We found some clothes in a water tub. There was a powder can and part of a ring of fuse at the bottom beside the clothes.

8th January.

I was with Haigh until he returned from the top pass-by.

Thomas Nayden, who had joined us, and I then went forward down the back travelling road to the dip north level.

On our way we saw a man lying dead about 80 yards above the dip north level. He was dressed. I did not take particular notice whether he was burnt or otherwise injured.

There was a deal of stone blown down across the bottom.

We went down to within about 10 yards of Thompson's box hole; and then from the dip north level mouth through into the engine plane.

The air was very bad there. We could not get any further; our lamps would not keep in.

We then came back out of the engine plane and went six or eight yards along the dip north level from its mouth in the back travelling road.

We saw nothing there but stone that had fallen from the roof and full and empty corves. Some of them were broken, but none burnt.

We then returned up the back travelling road to the pit bottom.

When I went with Haigh to Jabez Roger's place, the door that turned the air up Jones' jinny was gone. I saw nothing of it anywhere.

There were some corves standing in the top pass-by level, near the bottom of Jones' jinny. They had been driven back towards the jinny.

I came up about 7 with Haigh. I did not go down any more.

When I was coming up the steps I saw a gentleman and Henry Hinchcliffe standing there. They were waiting for Haigh to come up. They asked him for the keys to open the doors at the bottom of the steps. He said he had not the keys. He went with them to the doors.

I had worked in the Oaks pit about four years previous to leaving seven weeks before the explosion. I worked as a collier for a while, and the remainder of my time I was working on the level roads and assisting John Robson, the deputy, at Jones' jinny and in the dip north level.

I worked as a collier in three different parts of the pit, at the top of No. 2 jinny, in No. 10 board gate in the south level, and at Jones' jinny.

I have seen fire-damp in all these three places. I found it come down to the back of the chocks. That is the nearest it came to my working place. The chocks are sometimes seven feet, at others three feet from the face of the coal as the collier shifts them to his work.

At the top of No. 2 jinny, where I was working, it was very warm. I had sufficient air in the other two places.

When I went down the engine plane after the explosion I found that the archway against the new level had fallen a long way, and that things were knocked about at the top pass-by. The gas lights there were completely gone.

I could not see much at the bottom of the plane near Thompson's box hole, our lamps were getting very dull there.

When I returned from the top pass-by level to the steps I found that the air which met me was coming down as usual. I knew the position of the two doors near the bottom of the steps. If those doors had been blown away the intake air must have gone into the returns instead of meeting me.

I was with Haigh when he found William Wilson. We found him on the engine plane at the top of the steps, with his head against the empty corves and his arm on the side of them.

If he had been firing a shot in the drift he must have come round out of the mouth of the drift through the road that crosses between the mouth of the drift and the little archway from the cabin mouth. Then he would have to turn to the left hand and go along the engine plane to where we fonnd him, about 60 yards from the No. 2 shaft bottom.

James Marsh.—*14th January* 1867.

I live at Worsborough Dale. I am a collier.

I have not worked in the Oaks pit, nor had I ever been down in it until I went down after the explosion.

I got to the pit about 3 o'clock on the afternoon of the 12th of December, and went down shortly after with a brother of William Charlesworth. We found David Tewart, Matthew Haigh, and George Barker at the pit bottom.

We first went into the new stone drift. We brought a man out of it dead. He was not far in the drift.

After taking him out I came back and fetched another who was dead. He was about 10 yards in.

We next went a short distance beyond the top of the steps, and found Richard Hunt. He was a little beyond the steps, in a corner near the engine plane. He was dead.

We were on the top of the steps; we did not go down them. The place where we found him was more to the right than the top of the steps. We took him to the pit bottom.

Then Haigh, Sugden, Gibson, Hinchcliffe (*this was not Henry Hinchcliffe, who did not go down till 5, but was probably Thomas Cartwright*), another, and I went down the engine plane to the top pass-by level. We found a man there dead. He appeared to be very much burnt.

We went further and found the level fallen in. We got over this stone and found a lad there and a donkey.

We went on still further. Barker was seeking for two sons he had there.

We got on a little, but not much; the after-damp was so strong we could not bear it.

We then came back again to the travelling road.

We brought the lads we had found with us, and then Barker failed. We had to bring him to the pit bottom.

We left his two boys just by the travelling road on the way to Jones' jinny.

We all went up then, about 7 in the evening.

I went down again with some men I did not know.

When I was leaving the pit bottom with Mr. Smith, of Lund Hill, I saw the pulley chamber on fire. We put this fire out.

We then went with Mr. Maddison up to the face of the new stone drift. We saw the shot hole. Mr. Maddison, I believe, measured it with a yard stick. I did not take particular notice, but the shot hole was in the face about 2 feet from the floor.

Note.—The existence of any shot hole in the face of the new stone drift is so directly contradicted by Mr. Maddison's and other evidence that it must be supposed that what this witness asserts here is not correct. He repeats more than once that he did not take particular notice.

We came back then, and went down the back travelling road fetching men out.

The second time I was down I saw a blower of gas open in the floor, in a slit between the side of the engine plane and the back travelling road. We poured water into it and put it out.

I stopped in the pit until about midnight, when I came out.

I went down again about 1, and stopped in the pit till between 3 and 4.

Tewart then told me to go, and return at 9 in the morning.

William Gibson.—14*th January* 1867.

I live at Linley Fold. I am a collier.

I have worked four or five years in the Oaks pit. I left on the Saturday before the explosion.

I worked in a strait work place in the dip south level down the engine plane, 800 yards from the pit bottom. I was hurrier to Andrew Barker.

I went down the pit on the 12th of December, the day of the explosion, about 3 in the afternoon, with Charles Sugden, and I believe with Samuel Simmonds.

I found David Tewart, Matthew Haigh, and Thomas Cartwright in the lamp cabin.

Haigh, Cartwright, and I went into the new stone drift and down the engine plane to the top pass-by stables.

I saw a water tub with two jackets and a tin powder bottle in the drift, but I did not take particular notice.

We were returning, when we met William Hill and Thomas Nayden. We then went back to about 20 yards below the top pass-by stables, where we found Hill's son, whom he was seeking. The lad was lying dead with one arm under a horse. We took him to the pit bottom.

We then returned to the top pass-by level. Haigh, Cartwright, and Nayden went up an ending.

I went on with two others to the bottom of Jones' jinny. I found a lad there under a donkey. We carried him 40 or 50 yards towards the pit bottom, to the ending which Haigh, Cartwright, and Nayden had had gone up.

We left him and another with him there. We could not carry them any further. We were done up, and were obliged to return with Haigh and the others to the pit bottom.

I then went out of the pit. I was out half an hour, and went down the second time about 7.

I went again, with nearly the same men as before, down the back travelling road to the top pass-by. We brought Mark Lee up from the top pass-by to the pit bottom.

Where I was working in the Oaks pit the ventilation was very bad. I left because I could not stand the heat where I was working.

I was working in the last slit, near the end of the dip south level.

Andrew Barker, the man for whom I worked, went with the deputation to Mr. Dymond about a fortnight before the explosion. He returned to his work on Saturday, the day after.

Some sheeting had been put up in our place during the night of the day on which the deputation went. We found it put up when we returned to our work.

We were in about five yards before this sheeting was put up.

I told Barker on the Wednesday afterwards, a week before the explosion, that I could not stand the heat. He said "Very well; my lad will do for me." I left him on the Saturday morning following.

Samuel Simmonds.—14th *January* 1867.

I live at Barnsley. I am a collier, but am now keeping a beerhouse.

I have never worked at the Oaks pit.

I went down it on the 12th of December, the day of the explosion, for the first time. It was about half-past 3 in the afternoon when I went down.

I stopped at the bottom of the pit, assisting to get away some full corves which had been blown under the cage by the blast. This was in the No. 2 shaft bottom.

I next assisted in sending up the bodies as they were brought to the pit bottom.

Then I came up the shaft and ordered some stretchers.

After this I went down again and went into the south level to the stables. Then I returned and went down the steps.

I had heard of the shot hole. I looked for it on the steps. I saw no signs of it there.

I was with William Charlesworth. We went further down and found the body of a man named John Sloane in the travelling road. We brought him to the pit bottom.

When we found him he was lying on his back. He was not much burnt, but he was much injured by the blast; the back of his head was laid open. He had all his clothes on, and he must have been making his way to the pit bottom to come out when the explosion occurred.

I went up out of the pit about 7 in the evening, and did not go down any more.

Henry Hinchcliffe.—15*th January* 1867.

I live at Darfield. I am a shot lighter at the Darfield Main colliery.

I worked at the Oaks for seven or eight years. I left on the 23rd of last April.

On the day of the explosion I went down the Oaks pit about 5 in the afternoon.

I first went down the steps. Then I went through a door at the bottom into the return aircourse; the other had been blown down. The door I went through was in a slit between the travelling road and the return aircourse. It was next to the intake air.

I was with George Frost and John Harroll all the time I was down the pit.

When I was fireman in the Oaks pit I found gas in the goaves in No. 7 district. There was a good deal sometimes. At others there was not much.

I have seen it in No. 8 district at the time that district was being worked.

I have seen a little in No. 5 district.

I have also seen a little in the deep south level faces, but none in the banks, which were only just beginning to be worked when I was there.

There was also gas in No. 10 district. It was in the goaf in the farthest ending.

I have also seen gas in the goaves in No. 11 district.

I have not seen it elsewhere. I travelled nowhere else in the pit.

George Frost.—10*th January* 1867.

I live at Ardsley. I am a collier.

I work at the Darfield Main colliery. It is six or seven years since I worked in the Oaks pit.

I got to the Oaks a little before 3 on the afternoon of the 12th of December.

The first thing I did was to fetch some lamps from Darfield Main.

I went down about 5, in the first draw after the new rope was put on, with Mr. John Smith of Lund Hill, John Harroll of Darfield Main, Henry Hinchcliffe, and Henry and William Clarkson.

We went down the steps into the back travelling road. We went through a door at the bottom of the steps. We opened it and went through. There had been another door beyond that, but it was blown down.

We thrust the first door open that was at the bottom of the steps. It was shut again when we went forward into the return.

Harrold and Hinchcliffe went forward into the returns, and tried them with their lamps to see if there was any fire-damp in them. The lamps were all right.

We then went down the travelling road to a lamp cabin at the top pass-by.

This cabin was made in a slit on the left-hand side of the travelling road. The stopping in the slit was blown entirely down through the slit into the returns. We made the stopping good again with canvas.

The intake air was going through the cabin, towards the cupola, in the direction in which the stopping had been driven.

The stools and cans in the cabin had been badly smashed.

We then went into the engine plane to fetch out an old man named Mark Lee. We found him there. He was dead, lying in a hole close against the pass-by. His face was bruised. I did not see whether his clothes were burnt or not. We brought him into the travelling road.

We then went into the top pass-by level.

We made three stoppings good on the left hand going along this level. They had been all blown northwards into the returns.

At the bottom of Jones' jinny we found two little boys and a donkey, all dead and very much burnt.

We then went up Jones' jinny as far as we could get, shifting stone as we went on, 50 or 60 yards further.

We could get no farther, for we were exhausted with the bad air.

We brought the bodies of the lads back with us, and went up out of the pit with them about 9 in the evening.

I went down again with Hinchcliffe about 10.

We went again to Jones' jinny. The air was rather better. We got up to the overcast. It was blown down.

Then the air stopped us again. I came back to the pit bottom and came out about 2 in the morning of the 13th of December.

George Eastwood.—*14th January* 1867.

I live at Barnsley. I am a collier.

It is about a year since I worked in the Oaks pit. I was there for about a fortnight as hurrier to Smith Bates.

I went down the pit on the evening of the 12th of December, the day of the explosion. I was occupied in removing bodies from the stone drift in the dip north level.

Thomas Goodall.—*10th January* 1867.

I live at Ardsley. I am a collier.

I have worked in the Oaks pit about eight years; the last two as a miner.

I worked in a bank in the first ending on the dip north level.

I was at work on the morning of the 12th of December The roof in the goaf behind my face was on the weight. I heard it moving when I went into the place in the morning. I reported it to the deputy, Robson, when he came through. He said I had better go out. I left the pit about half-past 10. I have not been in since.

I never saw any gas in that bank since I began to work in it, neither in the face nor in the goaf. I have worked six months in that place.

Before that I worked near Jones' jinny. There was some gas there. It was in the goaf behind the chocks. We had to get stones out of the goaf to pack with.

The gas affected me for a length of time after I had been in it. I once tumbled down from it. There was always gas in the goaf in that place.

Tewart told me many times to be careful. I considered it was safe to work in the face. The gas only came up to the chocks.

The goaf where I last worked was a very small one. It was a very large one at Jones' jinny.

John Thompson.—*14th January* 1867.

I live at Hoyle Mill. I am a collier.

I worked in the Oaks pit up to the day before the explosion. I worked with my brother in a bank near the end of the south level. There was a dip board driven down to our face.

It was on account of being unwell that I did not go to work on the 12th of December, the day of the explosion.

The ventilation of my bank was sometimes very bad, especially the first thing in the morning; and sometimes a little better. I have mentioned it several times to our deputy.

I think the goaves got worse of late for gas, but the face has been middling clear.

I have had to go in to fetch stones to build packs with, and I have not been right for two or three days after.

The roof is very strong there. Sometimes it stands up for eight or 10 yards back, and I have had to draw the packs to make it break.

Every time the roof breaks more gas comes. There was a great deal of gas came out the last morning I worked, because the roof broke.

I am not very strong in health.

William Howarth Wood.—*15th January* 1867.

I live at Hoyle Mill. I am a collier.

I have worked in the Oaks pit about 10 years.

I was driving the dip headings at the bottom of the engine plane, rather more than 900 yards below Thompson's box hole.

I had no complaint to make about the ventilation there. I had the first air, and it will work down better than it will work up.

I went down the pit at 6 on the night of the 11th of December, and I came up at half-past 2 on the morning of the 12th. I have not been in the pit since.

Edward Seddon (or Siddons).—*29th January* 1867.

I live at Platts Common, near Hoyland. I am now an engine tender, but I formerly worked as a collier for about 18 years in the Oaks pit.

I went down the pit about 2 on the morning of the 13th of December, and I stopped there till about 10 minutes before 9.

Before I came up I felt a suck in the air, and a sudden reverse. We ought to have all been ordered out of the pit then.

My brother Christopher was killed by the second explosion.

Note.—It was then explained to the witness that any evidence relating to the second explosion could not be received at this inquest.

William Ward.—*14th January* 1867.

I live at Ardsley. I am a collier.

I have worked about 10 years in the Oaks pit. I worked with my father in the new level.

I was at work on the 11th of December; but I did not go down the pit on the 12th until about 5 in the afternoon after the explosion.

They were changing the rope at the No. 1 shaft when I got back to the pit.

I first went down the dip ending south of the engine plane. They were then repairing the overcast temporarily, by which the returns from the district in which I worked passed over this ending into the south east returns. This ending was full of after-damp below the overcast.

Mr. James Wilson, William Sugden, and I then went down the board gate under the engine plane into the north travelling road.

We went forward to the top pass-by. Hinchcliffe, Frost and others were putting up a sheet in a slit out of the back travelling road.

We went on over the stone, much of which was down there, along the top pass-by level to the stables. There were two or three dead horses there.

We then went forward down the back travelling road.

There was a dead horse five or six yards below the stables. One of its feet was off. We next found a man, whom I heard was Sloane, about 100 yards above Thompson's box hole. His head was cut very badly at the back. He was a black mass. I could not tell whether he had been burnt or not. He was dressed. He appeared to have been coming out of the pit. There were two picks lying near, two or three yards from him. He had his lamp gripped in his hand.

We then went on to Thompson's box hole.

We found nine men and boys there. They were all very severely burnt. They were lying in all positions; some in the box hole, some at the far end of it, and some in the plane. The blast had knocked them all about. The box hole end was blown out.

We then tried to get into the dip south level, but it was so full of after-damp that we could not get in. Everything there was knocked about in all directions.

Then we went a few yards below Thompson's box hole.

There was a great deal of stone down. The bars were blown out. The roof was weighting and falling nearly the whole time that we were there.

Mr. James Wilson, William Sugden, William Cartwright, Daniel Hawley, another, and I were together. We were the first who had got down so far. The time was between 5 and 6 in the evening.

We next went on the dip north level towards the stone drift. We found the overcast down. The after-damp was very strong there. We found three bodies a little farther on the level.

We then got over some stone we found down in the drift. Beyond it, in the drift, we found more men. There were 33 bodies in all.

We found three before we entered the stone drift; the others were all in the drift.

These men worked on the first and second endings in the dip north level. Some of them had come 400 or 500 yards from their working places. They had their lamps in their hands.

They had put their clothes on hurriedly. Some were without shirts, and with nothing on but their trowsers and their boots. Others had their jackets on.

The blast had come and they had tried to escape. They were not burnt.

We got along the level to the first ending. We found a horse driver here lying under a corfe, dead. He was not burnt. The horse lay dead at the low side of the ending.

We could not get any further because the road was blocked up both ways with corves. This point would be about 300 yards from Thompson's box hole.

We then returned to the pit bottom.

I went out of the pit about 7, and returned into it again in half an hour.

I went down to the dip north level again with Hawley.

While going down we met men coming up with Sloane. He was the first that was brought up from the low end.

We went down to Thompson's box hole and remained in the dip north level about five hours, sending dead bodies up as we got at them.

We found that the after-damp was coming strongly out of the deep at the overcast, which was down in this level.

We therefore all went back to the downcast pit bottom.

After this I went with Mr. Potter and another down the steps to the place where the fire had been reported to be in the board gate under the engine plane leading into the north travelling road.

I did not see that there had been much fire there, though the bottom was blown up for some yards by the force of the explosion, as it appeared to me. There was no gas coming out of this break up in the floor.

We then went up this board to the dip ending, going down from the overcast which I first spoke of, to the new level.

We went about 30 yards below this overcast. We found the air so bad in the ending that we returned to the pit bottom.

I then came out of the pit, about half-past 2 on the morning of the 13th December.

I was one of the men who went on the deputation to Mr. Dymond on the 30th of November.

All the others, except myself, were killed by the explosion.

The main object of our going was the ventilation, but we had another grievance.

We told Mr. Dymond that there had been an union meeting, and that Andrew Barker, who was working on the dip south level, had reported that it had fired in his lamp nearly all the time that he was working.

We told him that Charles Webb, who was working on the same level, had reported his place as being so hot, and the air so foul, that he had burned himself by falling against the gauze of his lamp.

We also told him that all the men on that level, particularly those beyond the old jinny towards the end of the level, had complained of being short of air.

Mr. Dymond said Barker must have been drinking, and that was why he complained.

Tewart said Webb was in the furthest bank on that level, and that his place was so hot from one end of his bank having come in close, so that the air could not work round.

Mr. Dymond also said that we should know if these complaints were right by examining the lamps; and he further said that he had his capital at stake, as well as the men their lives; and that he would go down the pit to see whether it as was we reported it. He asked us to go with him.

We then sent down to Hoyle Mill for some of the men who had made the complaint at the meeting.

I believe Andrew Barker, Thomas Jones, Joseph Band, and William Haigh joined us, but they are all dead.

Mr. Dymond, David Teward, and William Sugden went down the pit with us.

We first examined the lamps in the lamp cabin. Youle told us who the lamps belonged to.

We found all the lamps from the dip south level district very blue at the top of the gauze; some of them were blue about three parts of the way down.

This blueness is the effect of the lamp burning in air mixed with gas.

Mr. Dymond said these lamps had been too hot.

We then went down the engine plane, 800 yards from the pit bottom. We divided there into two parties.

The first working place I went to was Barker's. It was a bolt hole he was driving from one level to the other. It was about 13 feet in. We did not find any gas there, but it was very hot at the face of the working place. They had put a drop sheet up on the Thursday night. The sheet was put up across the level to force the air up.

Mr. Dymond told Barker that he had been getting drink, and that he had not been in a fit state for work. Barker said it was too hot there for any man to work. He was done up in about three hours.

We then went forward into the deep level to Thomas Jones' working place at the face of the level. There was no gas there, but it was very hot.

We then returned up out of the deep level into the middle or horse level, and went on out of that into the top or bank level. We went to the face of the bank level; we found a little gas there.

These three levels are all in connexion with each other, and are comprised under the name of the dip south level.

We then came back on the top level and went up a board. In this board the air was carried up out of the bank level with bratticing, 30 or 40 yards. There was no gas there, but it was very hot. There was not sufficient air.

The next place we went into was Webb's bank. We found one end of the bank had been in all across, but it had been partly headed out again.

Mr. Dymond then told Tewart that he must send more air on that side, south of the engine plane; and he asked us whether we thought we should work the day after. I said I thought we should.

Mr. Dymond then left us, and we went forward on the faces of the banks with Tewart. We found it very hot. There was very little air. We could hardly tell which way it moved. We lifted the dust up and tried whether the air would shift it.

We went forward on the faces until we came to Whittaker or Clerk's bank. He goes by two names. It was all on the weight. This bank is in the first range on the dip south level.

We could not go any farther on the faces of the banks in this place. The work was all on the sway. We expected it to come in every moment. The roof was breaking all the time we were there. We therefore went down the gate into the level.

Tewart said that the north side of the engine plane had an advantage over the south side, the cupola being on the north side.

We told Tewart that it was too hot for any man to work in those banks on the south level with the quantity of air they were receiving when the pit was at work.

Tewart said he would try to force as much air on that dip south level as he possibly could.

William Sugden and the other part of the deputation were waiting for us there.

We then came out of the pit.

I have worked in several places in the Oaks pit where there has been gas in the goaves. In some places it was bad. There was a great deal of it. I have never seen any where I last worked.

I went down after the explosion to bring my father out, if I could have got to that part of the pit where he was.

The corves were blown northward on the level from Thompson's box hole.

At the entrance of the top pass-by or 400-yard level there was a great deal of stone down on the corves, and some of them were broken; but I did not go on that level or observe which way they were driven.

15th January 1867.

The principal object of our deputation was not to get the cwt. in the ton taken off, although that was the first subject we mentioned.

Barker said in the pit, in reply to Mr. Dymond, that he had had drink, but not for a few days before that.

The deputation, after examining the pit, told Barker that he had exaggerated in saying that he had had fire in his lamp all the time he was working. His bolt hole was only three or four yards out of the intake.

The men went to work the next morning after the deputation had seen Mr. Dymond, and they worked regularly up to the time of the explosion.

I had advised the men to be idle the day the deputation went.

Webb's bank was the furthest bank in the first range of banks on the dip south level. Webb's arm had been burnt by coming against his lamp. Being short of air and there being a mixture of gas in the air was the cause of the lamp being so hot.

There is always more air in a pit on days when it is not at work than on working days. That arises from the absence of obstruction in the roads, such as loaded corves and horses.

In a very dusty mine, such as the Oaks, when the horses are working on the roads they stir up a great deal of dust that mixes with the air.

The absence of men and horses and lamps also causes the heat of the air to be much less on days when a pit is not at work than on days when it is at work.

Peter Woollen.—*15th January* 1867.

I live at Hoyle Mill. I am a carpenter at the Oaks colliery.

I was at work with another man repairing conductors in the downcast shafts on the 30th of November, the day of the deputation, from 8 in the morning till half-past 3 in the afternoon, when we were called out.

I saw Mr. Dymond and some others on the pit hill when I came out.

As soon as they had gone down we went to work in the shaft again.

On that day, and whenever I worked in the shaft, I used to put a scaffold on the bottom of the cage, and a cover over it, to keep the wind of.

The shafts are 7 feet 6 inches in diameter.

The cages are 6 feet 4 inches by 4 feet 4 inches.

When the pit is at work there are two corves, each 3 feet 11 inches by 2 feet 10 inches, in each cage, so that not much more air could go by the sides of a loaded cage than when our scaffold was on it.

Joseph Orgill Carr.—*15th January* 1867.

Evidence as to Deputation.

I was present with Mr. Dymond when a deputation came to see him on the 30th of November last. David Tewart was also there, and the six colliers who formed the deputation. It was Mr. Dymond's wish that I should be present.

I made the following minute at the time, but I did not read it over to the deputation:—

"30th Nov. 1866.—W. Ward, T. Mort, W. Rydes, C. Randison, J. Harrison, J. Bantam, Mr. Dymond, D. Tewart, J. O. Carr. Deputation want the cwt. off now without any conditions attached.

"Mr. Dymond won't concede any such thing.

"Deputation want ventilation.

"C. Webb's arm burnt through wafting fire out through gas. Andrew Barker's place was last night so loaded with gas that he could only work three hours."

I believe that the preceding minute is correct, with the exception that I am in doubt whether it was Joseph Bantam or George Evans who was on the deputation. W. Ward says it was George Evans.

The deputation presented themselves at the office and said they wished to see Mr. Dymond. He was in his own office at the time, and they went upstairs to him at once.

The first thing that they said to Mr. Dymond was, that they wanted the cwt. per ton conceded from that day, instead of from the 1st of January. He would not agree to that. Then the deputation said that Barker and others on the dip south level had complained that day, at the meeting of the miners' association, of want of better ventilation in the working places. Barker had said that during his last shift his place was so loaded with gas that he was only able to stop in it three hours; and Webb had complained that he had burned his arm while wafting out the fire in his board.

Mr. Dymond replied that it was a pity that the men who made those complaints did not come to him to make them personally.

He requested them all to go down the pit with him and Tewart. Previous to going down the deputation sent for the men who made the complaints.

Barker, Thomas Jones, and another or two, whose names I did not know, came soon afterwards, and followed Mr. Dymond and the deputation, who had gone on to the pit.

William Maddison.—*20th December* 1866.

I reside at the Woolley colliery, near Barnsley. I am a viewer.

I went down the Oaks pit on the 12th of December with Mr. Brown, Mr. Philip Cooper, and some others after the new rope was put on the No. 1 shaft.

I went into the new stone drift with William Sugden, the deputy, who was afterwards killed.

I examined the face of the drift very minutely. I saw no drill hole there. The floor of the drift was quite sound.

This was shortly after 9 on the evening of the explosion.

In coming up the steps I saw a shot hole in the side, which appeared to have been fired. I put my stick into this hole. There had been a small piece blown off from one side of the lower end.

Previously to the shot having been fired I think the hole had been about 3 feet 6 inches in depth.

There was a little debris lying on the steps which had been blown down by the shot.

The place was perfectly safe to fire the shot in.

Mr. Cooper was with me when I found the hole on the steps.

28th January 1867.

I examined the new stone drift to see if I could find any traces of gas either in the upper part of it or escaping from the crevices.

If this explosion had originated there I must have observed some indications of it.

There was nothing disturbed in the drift. There was an empty corfe standing within six or seven feet of the face, the wheels of which were on the rails in the usual manner. There were some clothes belonging to the men, and a tin bottle containing what I supposed from the rattle to be powder. There was straw lying on the floor about 12 yards back from the face. I concluded from all these things that there had been no explosion in the drift.

Although the hole was on the steps' side, I believe it had been drilled on the drift side.

It was about a foot above the first landing. It rose from the steps towards the drift.

Part of the end of the hole appeared to have been burst off. The stone was lying on the steps a little farther down.

My stick must have gone against the ramming when I put it into the hole on the steps' side. This ramming had not been blown into the drift, although the shot must have been fired on that side; for not only I could not get my stick up the hole when I was on the steps, but I should have seen the hole when I was in the drift if this ramming had been blown out.

There had not been sufficient stone at the steps' end of the hole to resist the action of the shot or to make a heavy blast. There could not be any loud report from such a shot as that.

I have had much experience in the effects of powder as a sinker and metal worker, and also as a collier.

If this shot had been lighted in the drift, and if, there not being resistance enough, it blew off the lower end of the hole, the flame in that case would be a mere flash. It would not go far.

I did not measure the diameter of the hole; but a hole, two inches in diameter and 2 feet 7½ inches in length, will contain about two pounds of powder.

John Sugden.—*December 20th* 1866.

I live at Hoyle Mill. I am a collier.

I have worked in the Oaks pit nearly 20 years. I went there soon after the 73 men were killed by the explosion in 1847.

I was one of the contractors for the new stone drift. Richard Hunt was the other. He was killed by this explosion.

I worked from 10 on the night of the 11th of December till 6 on the morning of the 12th.

I began to work at the new stone drift in August last. I never saw any gas or any traces of it there during any part of that time. I worked in it regularly.

I saw Hunt on the pit bank when I came out at 6 on the morning of the 12th. He was getting ready for going down.

William Wilson used to fire the shots for us in the day shift. He is dead. William Stephenson fired them in the night.

Stephenson lamps were used in the drift. I never saw a naked light there. The lamps were always locked.

I usually drilled the shot holes about a yard in depth. They would contain a pound of powder or a little more. The stone in which the drift was driven was very hard.

David Tewart let us the contract for the drift and gave us orders to blast it.

I thought the drift was about 4 feet from being through when I left the pit at 6 on the morning of the 12th. We could talk to one another through easily.

When the drift was crossing the return aircourse, Tewart said, "You are not far away from the return, "but there is sufficient thickness of roof. It cannot "take any harm. You can take notice if you see "any gas." I never saw any gas in the drift at any time.

17th January 1867.

The drift dipped toward the face or steps' end 5 inches in the yard.

On the morning of the 15th, between half-past 5 and 6, I went round to the steps' side and knocked to my brother, to see if we could ascertain how near the drift was to being through. I went to the place where we expected to come out at the top landing, about 36 steps down. I knocked to him and then he knocked back to answer me.

There were about 62 steps between the engine plane and the back travelling road.

29th January.

I know Thompson's box hole. Lamps were lighted there for the dip end of the engine plane and for the dip north and south levels.

Thompson's duties were to light lamps or to put new glasses in for those that wanted them, and also to hang corves on the engine plane rope.

He had a lamp near the cabin door for the purpose of lighting.

Sometimes the lamp top was off, at others it was on. At times the lamp was placed with the top off on a little knob of wood four or five inches high.

William Stephenson.—*15th January* 1867.

I live at Hoyle Mill.

I have been deputy over the night labourers in the Oaks pit about four years.

It was my duty to fire the shots in the night shift.

I was in the pit the night before the explosion until about half-past five on the morning of the 12th of December.

I did not go down again on the 12th after the explosion. I went down between 2 and 3 on the morning of the 13th.

Some time after I got down I went to the steps. There was a drill hole in the side. I put my stick up it more than two feet. It appeared to have been fired from the drift, and not from the steps.

The end of the hole was not more than three inches above the landing of the steps. The hole was slanting upwards. The drill could not have been held so as to have put this hole in from the steps' side.

The ramming was in the hole at the drift end. I put my stick up the hole. It came against something which sounded like ramming put in; not like stone.

The hole appeared to have come to within about nine inches of the steps. The shot had burst part of the hole off, and left part of the under side fast.

It was not safe in the drift when the shots were fired. I always went out of it after lighting them, but I returned in again to see that all was right after they had gone off.

The largest quantity of powder put into one hole was about a pound and three quarters.

For the last two months they had been filled while I stood by.

The shots sometimes put out all the gas lights at the pit bottom; but at others there were one or two left. They put out the lights round No. 1 pit bottom as well as round No. 2.

I had heard that the shot had been the cause of the explosion when I examined the hole.

William Sugden was with me on the steps. He is dead.

I did not go into the drift.

William Hutchinson.—*17th January* 1867.

I live at Barnsley. I am the manager of the gas-works there.

I superintended the erection of the gas holder in Oaks pit.

I went down on the 21st of July 1862 to examine the place where it was to be fixed.

At that time the gas was escaping violently out of the pit over which the gas holder now is.

I measured the quantity escaping at that time from this blower. It was about 300 cubic feet per hour.

The pressure on this gas would no doubt increase as fast as it was confined; that is, if the gas were prevented from escaping. I cannot tell how high this pressure would rise.

I did not superintend the putting down of the pipes, but I believe they are well laid.

I went down afterwards to see the pit when it was lighted up.

John Edward Mammatt.—*20th December* 1866.

I live at Birk House, near Barnsley. I am a mining engineer.

I am engaged at the Oaks colliery as surveyor, and in looking after the ventilation, under Mr. John Thomas Woodhouse. I receive my instructions from him.

I have been connected with this colliery for nine years. I have held my present situation for about two years. Before that time I was employed there under Mr. John Brown, who then held the same position that I now do.

During the last two years I have received my orders from Mr. Woodhouse alone, and have reported to him every week, or nearly so.

The owners of the Oaks colliery are Mr. Thomas Dymond and the representatives of the late Mr. Timothy Marshall.

Mr. Dymond occasionally went down the pit, and gave general orders and suggestions. He is a man of practical experience.

I believe that the responsibility of the underground management rested entirely upon Mr. Woodhouse. He was the consulting viewer, and I was his deputy. Mr. Dymond never interfered with me in the underground management. If I had any suggestions to make I used to consult him; and he also conferred with me when he wished to have anything done. The late David Tewart, the under viewer at the Oaks, and his deputies carried out all such suggestions.

The deputies were William Sugden, Christopher Siddons, John Robson, William Wilson, Robert Cadman, and Matthew Haigh.

Cadman and Haigh are the only survivors out of these from the first and second explosions; the others are all dead.

Part of these deputies were employed on the day shift, and part on the night shift. Each of them had a district in the pit assigned to him.

The only place in the pit where any shots were fired was in the new stone drift, near the downcast shafts. Any of the deputies had power to fire shots in that drift, but no one except deputies were allowed to do so.

Three men were employed in attending to the ventilating furnaces, who each worked eight hours shifts.

The furnaces were double, having two large grates side by side. The interior of each furnace is five feet in width. The grates are six feet long.

The pit worked single shift, except in one or two places which were worked double shift. The working commenced at 6 in the morning, and ended at about 2 in the afternoon.

I believe we were only working double shift in the dip south level and in the extreme dip headings for continuing the engine plane.

There were in the pit about 130 colliers with sets of tools; each collier had one, and some two, hurriers assisting him. There were also the horse drivers, the trappers or doorkeepers, the lamp cleaners, and the road menders; many of these were boys.

The plan marked No. 1 represents the workings in the Oaks pit up to July 1866, the time when I made the last survey. The districts into which the pit was divided and the working details are shown on this plan.

The number of the men at work in each district will be best understood by referring to Plan No. 2.

The seam of coal worked at the Oaks is the Barnsley Main coal.

It is on the average eight feet in thickness.

The dip of this seam is about 1 in 12, or 3 inches in the yard; the main dip is very nearly east; the levels, therefore, run nearly north and south.

The coal to the dip of the shafts is being worked by what is termed the long wall system. To the rise it was worked by the old Barnsley system of narrow banks, under which pillars were left in the first working between each bank, which were, however, ultimately worked out.

The recent average quantity of coal gotten per week from the pit has been nearly 4,000 tons.

The extent of coal belonging to this colliery is about 450 acres. About 300 acres of this are worked out.

The men employed in this pit used Stephenson safety lamps exclusively, except the hangers-on at the pit bottom, those employed at the stables on the south level, and at the top pass-by; these had lanterns, and not safety lamps.

The stables on the south level are about 150 yards from the downcast shafts, and those at the top pass-by are about 400 yards.

The pit bottom and the engine plane were lit by gas down to the top pass-by; and gas lights were carried along the south level nearly to the stables.

This gas was brought from a small pit, sunk several years ago, at the extremity of the dip north level, where the latter had been carried through a fault which crossed it. This pit was sunk to the depth of about 12 yards; but the sinkers were stopped by the gas (or fire-damp) they met with. The gas was suffered to escape into the returns for two or three years. Mr. Dymond, Mr. George Minto, and I then obtained Mr. Woodhouse's sanction for using it in lighting the pit.

A gas holder was placed over the little pit to collect the gas, and common gas pipes were laid from this gas holder along the dip north level to the bottom of the travelling road, 800 yards from the downcast shafts; from which point they were brought up this road to the pit bottom.

The surplus gas which rises into the gas holder is still allowed, as formerly, to escape into the returns.

Gas lights were used at the 800 yards station when the pipes were first laid down, and wherever naked lights had previously been permitted.

A year or two ago Mr. Woodhouse, after examining the pit, ordered that the gas lights at the 800 yards station should be removed, and that no gas or other naked lights should be used lower than the top pass-by, or 400 yards station.

There were two Clanny safety lamps, made of copper, for surveying, which I only used. They were kept by William Youle in his lamp cabin when I was not using them.

With these exceptions, no other lights but Stephenson safety lamps were allowed in any part of the pit.

The hurriers, horse drivers, and doorkeepers had each of them one of these lamps.

Youle's lamp cabin between the two shafts was the principal lamp station in the pit; but there were two other lamp stations, one at the top pass-by, and one at Thompson's box hole, where the men could bring or send their lamps to be lighted during the day.

When the men went out of the pit they left their lamps at Youle's lamp cabin, where each lamp after being used was taken to pieces, the gauzes and glasses examined and any part which was found to have been injured removed; they were then cleaned, refilled with oil, and left ready for relighting when again required.

All these lamps were locked, that is, fastened by the lamp keeper with a screw, which went through the bottom, and held the parts together. He lit them before they were delivered to the men at the lamp cabin for use in the pit.

The men were not allowed to set any of these safety lamps on the floor of the pit There was a regulation that all the lamps in use, when not in the hands of the men, should be hung up on a nail driven either into the coal or into one of the timber props or chocks.

The men were always cautioned to keep their lamps sufficiently far from the swing of their picks. I believe there was no rule with regard to the exact distance at which these lamps should be hung away from the men. Some men swing their picks a good deal farther back than others.

In general these regulations were well observed, but when in the pit I have sometimes, though very seldom, seen lamps set on the floor.

The most common accident to Stephenson lamps is from the glass being being broken. When this occurs, if the light is not extinguished by the breakage of the glass, the lamp remains a safety lamp of the same class as the common Davy.

But the men will sometimes strike their picks through both the gauze and the glass of the lamps.

I have recently seen two lamps which were injured only a week or two before the explosion. One of these, I think, must have been struck by a pick, there being a hole through both gauze and glass. I cannot tell how the other was injured, unless it had been done wilfully with a nail driven through the top.

These two lamps are now at the Oaks office.

We sometimes have had safety lamps broken or crushed by falls of roof or of coal, but for a long time I have not known any such cases.

Occasionally the glasses, or even the lamps are broken by the hurriers, who swing them on their thumbs and knock them against the corfe side as they push the corves along.

When a glass is broken, if the lamp is not put out by the accident, it generally remains in use until it is brought to the lamp cabin by the man to whom it belongs at the end of the day; but if a lamp is extinguished the man must go for another light.

If a lamp glass is broken the men have to pay for a glass; or if a lamp is injured they have to pay for the lamp.

Mr. Dymond and Tewart were in the habit of investigating the causes of such breakages. If I happened to be at the pit I joined them in this inquiry.

I am not aware that such accidental breakages were entered at the office.

There was a pit diary kept in Youle's lamp cabin; it was entered up every morning. The state of the mine and any occurrence which the deputies in charge considered that they ought to mention were entered in this diary by them, which I used to examine every time I went down. This book is still in the pit, but since Tewart's death there has been found in his house a private diary.

The intervals between the times of my going down varied much. Sometimes it was twice a week, at other times only once in a fortnight or three weeks.

The last day on which I was in the pit before the explosion was the 21st of November last. On that day I remainded down about three hours.

No powder was used in any part of the pit for working the coal. The only place where powder was being used at the time of the explosion was in the new stone drift near the bottom of the downcast shafts.

This drift was being driven in stone bind. It was about 7 feet wide by 6 feet high. The face of the drift where the powder was used on the day of the explosion was about 80 yards from the downcast shafts.

The objects in view in making this drift were, to give the men a more direct road into the travelling way on the north side of the engine plane and to improve the ventilation.

I do not know who authorized the use of powder in that drift, but I certainly should have allowed it had I been consulted. I was fully aware that it was being used.

Drifts cannot be made in stone without powder, except at a very largely increased cost.

My duties were confined to the ventilation and the general working of the pit. I had therefore only to superintend the setting out and driving of this drift. I had nothing to do with the contract for it.

The drift was set out to cross the south-east returns at a height of 8 or 10 feet above the roof of those returns.

The strata between the floor of the drift and the roof of those returns are stone bind.

I am quite certain that this drift had no communication with that return aircourse.

The dip end of the drift was distant 100 yards from the nearest goaf.

All the communications and passages in the neighbourhood of this drift are correctly shown on the plan of the pit No. 1.

On the last day that I was in the pit I went down to the end of the dip headings at the bottom of the engine plane.

There was a great noise there, caused by gas fizzing out through water near the face, but there was a strong current of intake air coming down, and I could detect no gas in the lamp.

I have not found gas in any of the working places in this pit during the whole of the last year. I have often tried to find it, but could not.

The extreme dip headings were the only place in the pit where I could go and be certain of hearing or seeing a little gas.

The working places and the goaves adjoining them were examined every morning before the men went down into the pit by the firemen and deputies as far as they could get into them.

I never heard of more than one complaint as to the state of the ventilation, and that was about a fortnight before the explosion. There was a deputation of men to Mr. Dymond on the subject; I was absent at that time, but I was told of the complaints which the men had made on my return, and I reported them, by letter, to Mr. Woodhouse. (*The evidence here contains details of the ventilation; but these will be best understood by reference to the table at the close of this evidence, and from the plans of the pit annexed to the report.*)

The farthest distance to which I have ever known a goaf open, was about 20 yards, I have found them open to this distance by getting in as far as I could up to the roof over the stone which had fallen. There are not, however, many of them which remain open more than three or four yards. Sometimes we have to climb up into these goaves 10 or 12 yards before we can find any gas.

These goaves are subject to sudden falls of roof.

They are tried every morning to discover whether gas is lodging in them, but they are liable to have gas in them immediately after the occurrence of any sudden fall.

The floor of the coal in this colliery also sometimes bursts up suddenly and discharges large quantities of gas.

I have known these outbursts to take place with such violence and to such an extent that Davy lamps would not be safe to use in the Oaks pit.

It was an occurrence of this sort which caused us to introduce Stephenson lamps throughout the pit.

I think there was one of these dangerous outbursts last August. It was entered in the pit diary.

The entry in Tewart's private diary is, "29th " August 1866, district No. 7, a large outburst of gas "in the second bank south side, low end of engine "plane, at 9 a.m."

I cannot tell whether this discharge of gas came from the floor or the roof. They almost invariably come from the floor.

I do not know what was the effect of this outburst, but on some occasions when they have occurred they have extinguished about 40 Stephenson lamps.

If such discharges of gas were to come in contact with imperfect safety lamps they certainly would cause explosions.

I was at the Oaks colliery on Tuesday the 11th of December, the day before the explosion.

I saw Tewart on that day, but heard nothing from him that gave me any reason to apprehend danger.

After leaving the colliery I wrote to Mr. Woodhouse as follows:—

"11th December 1866.—I have been at the colliery "to-day, and there is nothing particular to report. "There has been no new question raised by the men "since I wrote last. After the half-yearly survey is "made I intend to write to you a more detailed "report of each district."

I was absent at some distance on Wednesday, the 12th of December, the day of the explosion, but was recalled by telegram. I arrived at the Oaks from Cudworth at 10 minutes past 9 on Thursday morning.

The second explosion had occurred before I reached the pit. The cage of No. 1 shaft was being set to rights when I got on to the pit bank.

About 40 minutes after I arrived there the third explosion took place, which still further damaged the winding and head gear of the pit.

Great volumes of smoke came up the shafts and covered the ground around with soot and broken material.

None of the mining engineers who were present advised that any one should attempt to go down after the third explosion.

I was left in charge about 5 on the evening of Thursday the 13th.

Nothing occurred till half-past 7, when I observed sparks coming up out of No. 2 pit, with smoke and a very strong blast. This went on increasing till about 1 in the morning when it decreased. I did not see any flame. I looked down the pit once or twice. The sparks continued diminishing till about half-past 4. The smoke then abated a little. There appeared to be more steam than smoke.

At half-past 4 I was walking from the office on to the pit hill when I heard the signal bell from the bottom several times in the engine house.

I ran up on the pit hill to No. 1 shaft, and found the pit carpenter and one of the policemen shouting down the pit. I joined them and shouted down too. I heard a man's voice answer us from the bottom.

I first sent off a man to Barnsley, to the "King's Head," to wake up the viewers, and to tell them there was somebody alive in the pit, and also to the office of the inspector of police, while I collected all the men I could.

We then filled a bottle with brandy and water, which we let down to the man at the bottom, who found it and took it off. We drew the wire rope up again, and the bottle was gone.

We consulted as to the readiest way of getting access to the pit, and I set a man to get up the steam in the saw mill engine, to which is attached a small drum.

We then sent a staff of men to the cupola pit to remove the gin rope and pulley frame. This rope was long enough to reach the bottom. It was what was used in going down the upcast shaft. It was brought to No. 1 shaft; the pulley frame was fixed over the pit top, and the rope wound on the drum.

Then the viewers arrived from Barnsley. We got a sinking tub or iron bucket, and I and Mr. Embleton, junior, went down the No. 1 shaft.

We took three lamps with us, and examined the sides of the shaft all the way. It took, I believe, as long as a quarter of an hour to go down; so we were told afterwards.

About 100 yards down there was a stream of water coming out of the sides of the shaft as thick as my body, which fell about 120 yards down the middle of the shaft.

When we got to the bottom we did not at first see or hear anybody.

We found the sump at the bottom open. The scaffold was blown up. The sump was full of water and running over. I think it is nine yards deep. We had difficulty to avoid tumbling into it.

There was a quantity of stone and rubbish which we scrambled over.

There was a large fire about 40 or 50 yards from the shaft bottom, on the bank head of the engine plane.

I believe that what I saw on fire were the full corves of coal standing on the sidings ready to come up when the first explosion occurred. It was the place where the sidings are. These corves were all in a glow like coke.

I then shouted out, "Anybody here?" A minute, perhaps, afterwards we heard a man's voice answer, "I am here; take me out—take me out."

We found the man just between the two shafts, in the entrance to the lamp cabin, sitting on a heap of dirt against the wall on the left-hand side, about six yards from the place where we were, with the bottle on his knees.

The distance between the two shafts is 10 yards, and the communication consists of a lofty and wide archway 17 or 18 feet high.

The lamp cabin is on the left-hand side from the place where we were.

I went to the man and asked him where the others were. He said, "No, there is no more; I am the "only one." I asked him several times, and mentioned the names. I did not see any dead bodies. The man said, "There are two or three close to you," but I did not see them.

Embleton and I both shouted several times; I called them by name. I called, "Jeffcock," "David," "Sugden," and all I could think of. I received no answer.

I was satisfied from all I saw that we could get into the pit no farther.

I do not know how long we stopped in the pit; we were told when we came up that we had been about ten minutes at the pit bottom.

The man could not walk; we had to help him to the tub. I got him in and tied him in it with cord which I took down for that purpose.

After I had tied this man into the tub, and Embleton had got into it, I was putting one leg in when it toppled over, and I went into the sump up to the elbows; I shot my arms up and got out.

When I fell into the sump I shouted out, "What's this?" The man said, "Ah, there's two or three down there."

We then shouted up the shaft, and were drawn up as quickly as possible.

The man's name whom we brought out of the pit is Samuel Brown. I did not know him. He was one of the volunteers. He is now recovered.

There have been 17 explosions at the Oaks pit up to 3 20 A.M. on Tuesday the 18th of December. The shafts are now being filled up.

The No. 2 downcast shaft, which is to the east or deep of No. 1, is sunk on the top of a fault. The main coal at that shaft is 17 feet below the pit bottom.

The new stone drift was set out by me to come out on the steps about nine feet above the top of this coal.

The engine plane is in stone bind for 80 yards from the pit bottom. The bank top at the head of the plane has been made level for the sidings.

The new stone drift being driven at an inclination of 1 in 7, or 5 inches in the yard, it was impossible that any gas could accumulate in it.

The south-east returns, which were crossed by this drift near its end on the steps, had a roof of coal two feet thick.

This return aircourse was only seven feet wide. It was in the solid coal. The ground there was very strong. I never knew a fall to occur in those returns since I have been connected with the pit.

There are two wooden doors near the foot of the steps, which separate the intake air from the south-east returns.

When these doors were examined after the first explosion the inner door, or that next to the returns, was found down; but the outside one, next the intake, was standing in its proper position, and locked.

The first explosion could not have occurred in the south-east returns, because, if it had, it must have blown both these doors out toward the intake.

28th January 1867.

The first heavy top weight had taken place in No. 12 district, at the extremity of the dip south level, before the explosion on the 12th of December. It had not occurred in the dip slant the last time I was down, about three weeks before the explosion; but Tewart told me, about a week before, it had come on there.

After the first heavy weight the measures are generally very still for some time afterwards.

I think there are about 50 miles of strait work open in levels, board gates and other open drivage which a man can travel through, in the Oaks pit. The plan may show more, but a great deal has been posted back, or is close.

The length of wall face open in the east part of the pit, on the dip north and south levels and the dip slant, is about 1,000 yards.

The dip slant is the only part of the pit where the wall faces are entering the maiden coal, but the whole of that eastern district is approaching it.

The safety lamps were entirely in charge of the men and boys who were using them during the working hours; but it was the duty of all the deputies to examine them as they went round. We had no lamp inspectors except the men in the lamp cabins.

If a sudden outburst of gas occurred at any time, and came in contact with a damaged lamp in any district of the pit, an explosion must be the consequence; but I consider that under the ordinary conditions of the pit an explosion would be impossible.

A deputy or fireman would require about four hours to make the round of his district. During those four hours the gas in any of the working places might increase considerably if a fall of the roof occurred in the goaf, or if the barometer were falling rapidly.

If a large fall of roof took place, this change in the position of the gas might occur in a few minutes.

My opinions with regard to the ordinary state of the pit do not agree with the evidence which has been given by the firemen and others upon this subject.

As a rule I never went down when the men were out of the pit, because I always wished to see its condition when at work.

Assuming that William Wilson and Richard Hunt were found on the engine plane near the top of the steps, I do not think that they would have been there at the time when they were expecting a shot to go off in the drift. I think it improbable that they would have gone round that distance to watch the shot; but I think on the contrary that they would only go round there when they found the ramming was not blown out into the drift, after they had waited a sufficient time at the end of the drift for the shot to go off.

VENTILATION OF THE OAKS COLLIERY.

No. 1. Intake.	Cubic Feet per Minute.
To Furnace - - - -	17,220
,, South Level - - -	34,400
,, Dip Ending - - -	28,440
,, Travelling Road - - -	22,680
,, Engine Plane - - -	50,600
	153,340

No. 2. Returns at Cupola.	Cubic Feet per Minute.
To Furnace - - - -	17,220
,, Top Returns - - -	36,180
,, New ditto - - - -	17,850
,, Low ditto - - - -	95,760
	167,010

No. 3. Returns in Districts.	
To Furnace - - - -	17,220
,, Top Returns - - -	36,180
,, New ditto - - - -	17,850
,, Old North Level - - -	2,160
,, No. 4 and 5 Districts - -	19,600
,, ,, 12, 7, and 6 ditto - -	28,060
,, ,, 9 and Dip Headings -	21,115
,, ,, 10 District, North - -	9,360
,, ,, Do. do. South - -	6,900
,, ,, 11 District - - -	19,680
	178,125

GEORGE MINTO.—*10th January* 1867.

I live at Mount Osborne colliery. I am under viewer there.

I have known the Oaks pit since April 1856.

I went there at that time and remained there until December 1863, in the position of under viewer.

I had been down the pit twice between December 1863 and the day of the explosion.

It was about a quarter past 2 in the afternoon on the 12th of December last that I got to the Oaks.

When I arrived there the No. 1 rope was going, and Mr. Dymond with, I think, Christopher Siddons was coming up out of the pit with a man and two boys badly burnt.

I called Mr. Dymond's attention to the state of the No. 1 rope. It was damaged in several places, but at one place in particular half of the rope was gone. This rope went down and came up again several times after that. Siddons and two or three more went back into the pit with it.

Mr. Dymond remained to see that a new rope was got ready to replace the damaged one, and to watch the people going up and down the shaft.

The No. 2 rope had been detached from the drum previous to my arriving at the pit.

While the new No. 1 rope was being prepared I went to the office with Mr. Dymond to examine the plans of the pit; and as soon as it was put on I went down. It was then about 5 in the afternoon.

Mr. Dymond, Mr. Brown, Mr. Kell, Mr. Philip Cooper, Mr. Maddison, and Mr. Woolley went down the pit at the same time.

We first went to the top of the engine plane, then returned and went on the south level to the stables.

We found a dead horse 20 or 30 yards on the level.

There were full and empty corves, many of them smashed all to pieces, lying about halfway between the pit bottom and the stables.

We perceived there had been a fire at the stables, which had been put out.

There were heavy falls of stone from the roof all the way.

I went on to No. 4 board gate, and then returned alone to the pit bottom.

On going in again I met the rest of the party coming back. They had returned to the same place where I had left them.

We then went down the dip ending, south of the engine plane, to an overcast on this ending that had been blown down. We found it had been temporarily repaired.

This is the overcast by which the returns from the No. 4 and 5 districts are brought to join those from the No. 6 and No. 7.

We then returned a short distance and went down the board gate under another overcast, and under the engine plane into the north travelling road leading from the steps.

This last overcast was standing. It had had a shake, but it was not much damaged. There was no air going through.

At the bottom of the steps there are a pair of doors going into the returns. The first door was locked. I saw that it was locked. I did not go through it. I believe it was Cadman who opened it.

There were so many persons who went through, and the door was so long open, that I thought it was time it should be shut again.

It was about half-past 6 when we were at these doors.

We then went up the steps on the right. Going up I noticed a shot hole. I did not measure it, as I had no stick. I put my lamp to it. It appeared to be a clear drilled hole, but it was covered with dust. Every part about the steps was equally coated with dust. There were many small falls of dirt on the steps.

We then tried to get to the cupola shaft. We went about halfway, a short distance beyond the junction of the furnace drift, but we found the air so bad on this road from after-damp, that instead of going on to the cupola we took the other road, and went to the furnace.

We found the scale doors near the furnace a little damaged. They had been temporarily repaired before we went there.

We then passed through a pair of doors into the returns coming from the rise workings. I went into the middle of them and tried them with my lamp. I found them full of after-damp, but the lamp did not show any traces of fire-damp, nor did I perceive any smoke.

We had started from the pit bottom with the intention of getting into the returns on the deep side of the cupola shaft to ascertain whether there was any standing fire in the pit, but were driven back on that road by the after-damp we met with in it.

We then returned to the downcast pit bottom.

After that we went down the engine plane. The first falls I observed were at the new level end. There were several heavy ones there. The crown of the arch was broken as if it had been scooped out upwards.

When we got to the top pass by, 400 yards down, we turned into the north travelling road, down which we went to Thompson's box hole, the 800 yards station, where the dip north and south levels meet.

On our way down to the box hole, about 100 yards below the stables at the top pass-by, we found a dead horse lying, with one of its legs broken off.

In the engine plane close against the box hole we found many dead bodies very badly burnt. There appeared to be about 10 or 12, but I did not count them. Some of them were naked from their clothes having been completely burnt off them. I saw many broken lamps lying about opposite the lamp cabin door.

I then went back to the pit bottom and out of the pit to send down men to assist.

At 10 I went down into the pit again to take Mr. Parkin Jeffcock and some others in, but returned out directly afterwards to send more men down.

I went down again with Mr. Smith, of Lund Hill, at half-past 1 on the morning of the 13th of December.

We went down the engine plane and along the dip north level towards the stone drift to an overcast just before entering the drift.

This overcast had been blown out; we found it had been temporarily repaired by Mr. Jeffcock and the men with him, whom we met there.

We all then went forward through the stone drift. We found from 20 to 30 dead bodies lying within a distance of less than 20 yards just at the far end of the drift. They were not at all burnt, nor injured in any way. I did not see any lamps there.

Mr. Jeffcock, Mr. Smith, and I then returned up the engine plane to the lamp cabin at the pit bottom at half-past 3 or 4.

Mr. Jeffcock, Mr. Smith, Christopher Siddons, William Sugden, and I next went to an overcast over the new level, near the dip ending, 400 yards from the pit bottom, and 200 yards on the level. I found that this overcast had been completely blown away. I could not see any part of it. We had no men to do anything there, and we left it.

I saw the bodies of five lads, horse drivers, in this level and two or three horses. I could not see whether the boys were burnt or not. Their lamps had been much knocked about.

I went out of the pit shortly before 6 to send men down, and returned in again at a quarter past 8.

I went 150 yards on the south level to seek Mr. Jeffcock and Mr. Smith. I could not tell which way they had gone, and I returned to the pit bottom.

I sat about five minutes in the lamp cabin, and then decided to go up to tell Mr. Dymond and Mr. Brown, who were at the top, that we could do nothing for want of men.

The greater part of the volunteers had gone up from some alarm. Several draws of 14 or 15 men at a time had left the pit.

I went up to report. Only one man went up with me.

This was at about 10 minutes to 9 in the morning of the 13th of December.

About six or seven minutes after I got out the second explosion took place.

I was looking down the cupola shaft when it occurred. I thought I had seen some sparks coming up the shaft. I was looking down it a second time when the explosion happened.

Mr. Dymond, Mr. Potter, Mr. Brown, and Mr. Smith, of Monkwearmouth, were there also.

Some of the men whom we found dead in the stone drift had their clothes on to come out, and some had only what they worked in. They seemed to be coming away in a body from their work.

Those whom we found at Thompson's box hole did not appear to me to have left their work.

From all I saw, I think the first explosion originated in the dip south level.

The blast appeared to have come from the south toward the north, and from the bottom of the engine plane upwards. I was quite satisfied as to the direction in which the blast had come by the way in which the arch over the plane was scooped upwards.

It must either have taken place in the dip south level, in the dip slant, or in the dip headings. All the bodies at Thompson's box hole were burnt.

Both bodies and lamps, the cabin doors and everything in the cabin were blown outwards from it into the plane.

This cabin was made when I was at the Oaks. It had two doors, one at the front and one at the back. It was made in a slit. There was no stopping in the slit when I was there.

There were gas lights at this place at that time; I then considered them safe.

The firing of a shot hole on the steps could not affect the air in any way down at this cabin.

If the explosion had taken place in the south-east returns, near the new stone drift, the separation doors between the intake and the returns would have been blown to pieces; but the door next the intake was left standing.

I did not find any signs of an explosion at or near those doors. The corves on the engine plane were only slightly disturbed at the top of the steps.

The gas in the goaves fluctuates a good deal. It may at any time be forced down to the working faces by large and sudden falls of the roof.

There have also been in this pit numerous outbursts of gas from the floor.

14*th January* 1867.

The No. 8 district is the first place where the working of this seam of coal by long wall was tried at the Oaks.

There was a face of more than 500 yards in length in No. 8. It was not all in a straight face. Every 40 yards there was a cutting, that is, the face was snecked or a little stepped.

I know from my experience that fire-damp exists in the strata forming the roof and floor of this seam of coal under a state of great pressure.

The Barnsley Main coal is the only seam which has yet been worked in the Oaks colliery.

The coal measures are entirely unworked to the deep of the Oaks.

When, therefore, a long tract of this 8-foot seam is excavated there is an immense pressure acting on the roof and floor of the mine, through which the fire-dam from all the other unworked measures above and below this seam has a tendency to discharge itself into the workings of the pit.

The roof and floor have been liberated by the working of the coal in several of the districts of the pit over areas of 30 or 40 acres, without any pillars having been left as supports.

I do not think that a face of work of 500 yards in length is dangerous, but that depends on the length of time during which the roof hangs ; if it does not break down closely upon the working faces, such an extent of goaf is dangerous.

During the time I was acquainted with the Oaks pit there were four large and sudden discharges of fire-damp in the workings.

The first was in 1858, in district No. 8. This outburst occurred in the north-east of this district.

The next was also in No. 8. I think this was about three years after the first. It occurred further to the rise, and more to the south-west of the same goaf.

The third discharge was in 1861 or 1862, in the south-west of No. 5 district.

The fourth discharge was in 1862 or 1863. It was much smaller than the others. It was only noticed for an hour or two during the night.

The first of these discharges of fire-damp in 1858, in No. 8 district, put put 40 or 50 lamps.

The colliers had Stephenson lamps, and the hurriers Davys, at that time.

This outburst put out all the Stephenson lamps. The gauzes of the Davys became red hot. Some of the men buried their Davys in the slack to put them out. I saw others who had burnt their hands with the gauzes, trying to pull the wick down with the pricker to put them out.

We removed all the Davy lamps from that time, and replaced them by Stephensons.

The Stephenson lamps were put out by this outburst in 1858 along a range of about 500 yards in length, extending from the south-east to the north-west across No. 8 district.

I think this outburst occurred with the first top weight that we got in that district. The lamps were put out down to the first bank of the main level. They were not put out in the level which was to the deep.

The second discharge in 1861 was also in No. 8. The men who were affected by it got notice from one of the colliers in whose bank it commenced. He heard the rushing noise. The floor cracked across two banks, and the fire-damp came up with a sound like steam blowing off from a boiler.

The third occurrence of this kind was in 1861 or 1862. The outburst took place on the east side of the south level in district No. 5. It fouled the air for more than 1,500 yards.

In this instance a fall of the roof and a breaking up of the floor occurred at the same time, as in both the two previous cases. The floor and the roof broke simultaneously through a length of 60 yards. The crack in the floor was not so deep in this instance as in the two previous discharges, but it was longer.

This outburst happened in No. 5 district, about 6 in the evening. It put out the lamps of the night shift men who were working in No. 5 district, and also those of the men working in No. 3 to the rise and west of the south level, 1,500 yards from the point where the outburst occurred.

All these discharges of fire-damp which I have described passed off towards the rise of the mine with the air. They did not come back against it in any case.

In two of them which took place in No. 8 district, the cupola shaft was only about 100 yards to the rise of the top end of the range of banks, and the returns went to it direct.

In the four cases the level roads were all to the deep of the workings where the outbursts occurred.

The dip slant workings lie to the south-east, or to the deep of the point where the intake air enters them. If an outburst of fire-damp came very suddenly and in a large quantity, this might cause it to back up against the intake air in this district.

The No. 7 district was also very dangerous. The top bank in that district was the worst in the pit; but I left the colliery when this part was being opened.

JOHN PLATTS.—11*th January* 1867.

I live at Wharncliffe Silkstone colliery. I have been the under viewer there for 12 years.

I went down the Oaks pit three or four years ago to examine the gas apparatus which was being erected at the far end of the dip north level. There was then a large quantity of gas coming from the small pit over which the gasometer was being erected.

I went down again on the 12th December last, at about half-past 5 in the evening, with a man named Jackson, from the West Silkstone colliery, and two others whom I did not know.

I found Mr. Brown, Mr. Potter, Mr. Phillip Cooper, Mr. Maddison, Mr. Smith of Lund Hill, and David Tewart in the lamp cabin at the pit bottom.

The first thing that I did was to go down the engine plane with William Sugden a deputy, Jackson, and four others. We found the floor of the pulley chamber on fire, and after having had the fire put out with water we went down the plane.

We went forward until we got to the top pass-by. We found this place almost stopped up with timber, from the roof having fallen. The plane was from 14 to 15 feet wide at this point. Farther back it was from eight to nine feet.

I picked up four gas burners near here. I think some of the small branches were broken, but the mains appeared to be in good order.

We left the plane there, it being so difficult to get along it, and went into the back travelling road. The intake air was coming down that road as steadily as down the plane.

We found the body of a very stout man, who was slightly burnt, below the top pass-by in this road.

At the bottom, 800 yards from the shafts, I turned to the right into the engine plane again.

I found three bodies there. They were lying in the plane. These bodies were very much burnt, they had only some few rags left on them. Their clothes had been nearly all burnt off.

I then tried to get into the dip south level by the dip ending which runs into the level at that point, but the after-damp was so strong that I could not go farther than about 10 yards.

I then turned back and went about 10 yards down the engine plane.

I found three bodies almost roasted lying at the entrance to the level, partly in the plane and partly in the level.

Three lamps were lying close to these bodies. One of these lamps was bulged, the others did not seem to be injured.

I next tried to enter the dip south level. I got on about 12 yards, but found the air so bad that I was obliged to return into the plane.

A little further down below the level I met with two boys dead in a slit. They and their clothes were burnt, but not so badly as those I had found before.

I got about 150 yards farther down the plane below the dip south level, 950 yards from the downcast shafts.

It was impossible to go farther. The air was quite stagnant in the engine plane at that point. I therefore went back to the dip north level.

I met Mr. Dymond, Mr. Brown, and Mr. Smith of Lund Hill there, coming down the travelling road. After ordering Sugden to remove the bodies which had been found, we went on the dip north level to the first overcast.

This overcast had been blown out. A good deal of gas was coming out from the dip side at that point. It was hanging under the roof, but we could walk below it. It was mixed gas, but would explode in the lamp.

We went forward on the level into the stone drift. We found many corves there one upon another. It took us nearly half an hour to make a road through the drift by moving them.

Beyond this in the drift we met with 34 dead bodies, lying in lots of three, four, and five together. Their lamps were lying near them. I examined one lamp, which was not at all injured. All these men appeared to have died from after-damp. I did not see any signs of fire in this level.

Mr. Dymond and Jackson left us here. Mr. Brown, Mr. Smith of Lund Hill, and I went forward on the level to the first ending, about 250 yards from the engine plane. I found a boy dead there. His legs were under some loaded corves, which appeared to have been blown upon him. He was not burnt, nor were there any signs of fire there.

We next went about 30 yards up this ending, but the air was so bad from after-damp that we could go no farther. We returned, and went forward on the level to the second ending, but again we found the air so bad that we were compelled to return. This, I believe, was at 35 minutes past 8 in the evening. We then all returned to the engine plane.

On returning I tried a second time to go down the plane. I got nearly 100 yards below the deep levels, but was stopped by finding the air in the plane too bad. On the floor was a kind of mist, and above it was full of explosive gas. It was filling from the workings down below. The upper part was full of this gas and the lower part full of after-damp. This prevented me from going so far down the plane as in the first instance.

I then rejoined Mr Brown and Mr. Smith of Lund Hill at the bottom of the travelling road, and all of us being nearly exhausted we returned toward the pit bottom.

When we had got about three-quarters of the way up we found a fire in the floor; I think it was a blower of gas, which had ignited when the explosion took place. We went on to the pit bottom and sent men down with water to extinguish it.

After stopping for about half an hour in the lamp cabin to rest I went up out of the pit, and did not go down again.

I did not see any corves on the engine plane till we got to the top pass-by. Those which I saw there were loaded. They were thrown up one against the other and broken in all directions.

I believe the explosion originated in the dip slant to the south of the engine plane below the dip south level. It appeared to me that the blast had come from that quarter. The dip south level appeared much injured where it entered the plane, and beyond this point there was great destruction a little farther up the plane.

In the first 400 yards down the engine plane I was at a loss to know from which direction the force of the blast had come. At the 800 yards station it appeared to have come from the dip south workings up the plane.

I do not see how a shot fired on the steps could possibly have been the cause of this explosion.

I am aware that gas expands considerably, and may explode in many different places at the same time from this expansion, although there may not be gas all the way. I know that the flame of gas when ignited will go a great distance, and will travel very rapidly.

I did not see the doors at the bottom of the steps, but I have heard their position described. If the explosion had commenced near those doors the pressure upon them must have been so great that they must have been smashed to pieces.

When an explosion takes place it interferes with the ventilation throughout the pit. If there is gas anywhere, it forces it out.

The expansion of gas when ignited is in every direction, wherever it can find a direct open channel for escape.

All the slight explosions I have known have travelled against the intake air; but an explosion like this would go everywhere where there was an opening for it to escape.

If an explosion occurred in the dip slant or in the dip south level it would have the effect of instantaneously exploding any accumulations of gas in the goaves to the south-west of those districts, and the expanding gases would take the readiest channel of escape to the surface.

I have known a sudden ouburst of gas in the Wharncliffe Silkstone colliery to come out with such violence as to stop the ventilation entirely. It stopped the air from entering the mine. It filled all the workings, and backed up 400 yards in one direction against the intake air.

If such an outburst as this had occurred in the Oaks pit in the dip workings it would have backed up to Thompson's box hole, and fired at any naked light there.

In the case of which I am speaking the quantity of intake air entering the district where the outburst took place was 12,000 cubic feet per minute, which was passing through a drift 20 feet in area. The velocity of the intake current must therefore have been 10 feet per second.

This outburst occurred on the same day as the explosion at the Edmonds' Main colliery, on the 8th of December 1862.

James Wilson.—15*th January* 1867.

I live at Darfield Main colliery. I am the under viewer there.

I got to the Oaks colliery shortly after 2 on the afternoon of the 12th of December. I went down the pit about half-past 2 with Mr. Joseph Smith, junior, and another man whom I did not know.

We first went to the new stone drift, but did not go down to the face, and then across the top of the engine plane to the dip ending on the south side. There was a fall of stone in this ending about 100 yards from the pit bottom. We got over it and found two bodies lying beyond, not burnt. We then went forward down the ending to the first overcast which had been blown down. After setting on some men to repair this overcast, and to get up the bodies, we returned to the pit bottom, and went up shortly after 4.

I went down again with Mr. Potter and others a little before 5.

We proceeded down the dip ending to the overcast, and after seeing that it had been temporarily repaired, we went down the board gate under a double inverted overcast and down the travelling road to the top pass-by stables.

The force of the blast had been very severe there; but we saw no indications of fire. A little below the stables we found a dead horse very much knocked about, and one of its legs broken off.

We then went down to Thompson's box hole, and along the dip north level to the stone drift. We found a great many bodies there, not burnt. We then returned to the pit bottom, and I came out of the pit.

I went down again about 8 with Joseph Meakin and three others whom I did not know.

This time we went down the engine plane. At the top, full and empty corves were standing upon the road as if the pit were at work. They had not been disturbed at all.

The farther we got the more force the blast seemed to have had. The timber was all knocked out, and the arching down.

From the engine plane, we proceeded along the new level to the dip ending. We found five bodies, a dead horse, and pony in this level. The horse was slightly burnt.

We then returned up the dip ending to the pit bottom, and I came out again about half-past 10. I have not been down since.

I think the explosion must have taken place in districts 12, 7, or 6.

The force seems to have been the greatest where the blast came out into the engine plane through the slant, a little above Thompson's box hole. It had knocked all the timber out there. The blast appeared to have spread itself from that point.

The bodies at Thompson's box hole were all blown right out into the engine plane.

The box hole was made in a slit. The passage through it was not clear. There was a good deal of debris there, which we got over, but could not go forward above four or five yards, the after-damp was so strong. It was very warm there.

The corves in the dip north level were driven over a little by the force of the blast.

Phillip Cooper.—*17th January* 1867.

I live at The Holmes, near Rotheram. I am a viewer, and the manager of the Rotheram, Masborough, and Holmes Coal Company.

I was down the Oaks pit four or five years ago to examine the mode of working the coal. I went through a great part of the pit with Mr. Dymond and Mr. Minto on that occasion.

I was at Barnsley on the 12th of December, and hearing of this explosion I went to the pit, which I reached about 3 in the afternoon.

At this time the men who had been burnt were being brought up the No. 1 shaft. The No. 2 shaft rope had been taken off.

The rope of the No. 1 shaft being found unsafe, a new one was put on. This having been done, Mr. Dymond, Mr. Brown, Mr. Maddison, Mr. Minto, and I went down.

We first went along the south level to the stables, where there had been a fire. This had been put out.

From the stables we went forward to the No. 2 jinny. We went up this a few yards and found a good current of air passing there.

We then returned to the south level, along which we went to an ending from the dip workings. The after-damp was coming out of this ending so strongly that it was impossible to go any farther.

We then returned toward the pit bottom, and went down the dip ending south of the engine plane to an overcast, which had been blown down but was now partially repaired. The after-damp was very strong in the ending beyond the overcast.

We therefore returned a short distance, and went down the board under the engine plane into the travelling road. In going down I passed over the place near the travelling road where a discharge of gas and a fire was afterwards said to have taken place. I saw nothing of it when I went down.

We found a very good current of air at this point passing down the plane and travelling road into the workings.

We next went to the doors at the foot of the steps which separate the intake from the south-east returns.

The outside door was uninjured. I passed through it. It closed itself after me.

The second door next the returns was gone, but the frame was standing, and the hinges were still on the frame. From the direction in which those hinges were bent, and from my not having seen anything of the door itself, it is my opinion that it must have gone into the returns. If this door had been blown the other way, from the short distance between the two doors, I must have seen some fragments of the one which was gone, between the place where it had been fixed and the outside uninjured door which I had passed through.

If an explosion had occurred in the south-east returns near the foot of the steps the probability is that both these doors would have been blown out into the intake.

These returns were full of after-damp. They did not appear to contain any fire-damp.

After this we went to see whether the furnace had been properly put out. I did not reach the furnace. The after-damp was issuing from a slit on the deep side of the furnace drift. I remained with Mr. Maddison to examine this; and when the others returned from the furnace we went back to the pit bottom.

We then all went down the engine plane as far as the new level. Part of the arching of the plane was blown down here.

From this place we went down the travelling road to the dip south and north levels.

We found several bodies lying dead about Thompson's box hole.

The dip south level was full of fire-damp. I did not attempt to go into the dip north level; but some of the others went into it.

After this we went back to the pit bottom.

In returning we went up the steps. I saw Mr. Maddison examine a hole on the right side of the steps, toward the new stone drift, by putting his stick into it. It was some distance up the steps, just above a landing. There were some loose stones lying about on the steps near the hole. I did not examine the hole to see whether the sides had been recently broken off it. Everything there was black and dusty.

We then went to the lamp cabin, and Mr. Jeffcock coming down, we left the pit in his charge, and went up between 10 and 11 on the night of the 12th.

The force of the explosion had been very strong along all the south levels. It had evidently come out of every opening from the south side of the pit into the engine plane and along the south level toward the pit bottom.

I cannot say exactly where the explosion originated, but the chief force of the blast came from the south.

I think that it did not occur at any of the naked lights which were ordinarily in use in the pit, nor from the shot which was fired in the new stone drift.

It is my opinion that if any fire-damp from No. 8 district had ignited at the naked lights at the top pass-by, the force of the blast from the explosion must have been in the opposite direction to that in which it appeared to have come. If we could suppose that the explosion originated on the north side of the engine plane we should not have found the appearances which we did in the dip south level. These were inconsistent with any such theory.

I think the force of the blast was in this explosion so great, that it reversed the current of air, and made the downcast shafts upcast for a few minutes. I saw one of the subsequent explosions on the 13th, and that effect was then produced; but in a very short time the air again took its ordinary course.

I consider gas lights in a pit to be much safer than any other kind of naked lights, because they are fixed and therefore cannot be carried about, and because they are easily extinguished. There is no light which is so much under control. I believe ordinary gas lights consume about five feet of gas per hour.

The necessary consequence of any large explosion on the deep side of this colliery would be that it would sweep round through all the levels I have enumerated, that is, the dip south level, the new level, and the south level.

The arrangement and disposition of the air channels which united these three levels on the south-east side of the colliery were such that an explosion in that district would take all those levels as its most open and direct course to the shafts.

Explosions extend in the direction of the least resistance; and there being no barrier to separate one district from another, in this pit, a serious explosion on the south-east side would necessarily sweep through all these three levels, which are connected together by transverse channels adjoining the solid coal.

The site of this explosion may thus be said to have presented a complete continuity of open airways around the district where it appears to have been most violent, and from which it rushed out through these three levels into the engine plane.

In this south-east district of the pit there is, on one side, solid coal, and on the other side there are only these three outlets or levels along which such an explosion could extend.

The damage which has occurred appears to have been chiefly in these outlets to the force of the explosion, which has passed onwards by these levels where it encountered the least resistance in its course to the engine plane.

The depth to the Barnsley Main seam is 350 yards in the Holmes colliery, which I manage.

This colliery has been at work for about five years. The steam there is not very fiery.

We have had on one or two occasions considerable blowers of gas, which continued for some time, but we have had nothing resembling those large, sudden, violent outbursts which have been described as occurring in the Oaks pit.

There must have been a considerable extent of explosive atmosphere in this pit at the time of the accident which the ventilation was not sufficient to render harmless by dilution and to carry away; but, except under the circumstance of a sudden outburst of gas, I think this ventilation was ample.

Accumulations of gas on the edges of the goaves may be dislodged by ventilation, but it is my opinion that the total quantity of air in circulation would be reduced by attempting to force it across these large goaves.

The air currents in mines go by the shortest course if not opposed by stoppings, doors, or regulators, and thus driven through longer channels.

Therefore, in this pit, the north side would be likely to take a greater quantity of air than the south side, if its passage in that direction were not opposed by the means I have spoken of.

Where the higher edges of the goaves cannot be ventilated I should recommend that the coal should be worked downhill; but the roof is much more difficult to maintain when working in that direction than when working uphill. The roof fractures more, and requires more timber and greater care to keep it up. In working uphill the weight rides downhill and goes into the waste; on the contrary, in working downhill it rides upon the face. There is therefore more difficulty with the roof in working in the latter direction.

The barometer began to fall some time before, and continued to fall on the day of this explosion. I observed it at about 8 on the evening of the 11th, and again at about 8 on the morning of the 12th December.

George Johnson Kell.—18*th January* 1867.

I live at Barnsley. I am a mining engineer.

I had never been in the Oaks pit before the 12th of December. I went down on the afternoon of that day, about a quarter before 5, with Mr. Dymond, Mr. Brown, Mr. Philip Cooper, Mr. Maddison and Mr. Minto. I was with these gentlemen during the whole time I was down.

I heard Mr. Cooper's evidence yesterday. I agree with him in all the facts that he mentioned, and in some of the opinions which he expressed, but not in all of them.

I agree with him that the explosion originated on the south side of the pit. The main force of the explosion came from the south.

From the quantity of air passing through the pit I am satisfied that it was not produced by any of the gas lights, nor by a shot fired in the new stone drift.

I also agree with him that the amount of ventilation was sufficient to dilute and render harmless all the gas which under ordinary circumstances escaped into the pit; I therefore think it must have occurred from some large, violent, and sudden emission.

I do not think it possible that there could have been any gas lodging in the roof, or above bearers in the intake air currents that were rapidly descending the engine plane and adjoining roads, which could have been reached by the flame of the shot fired in the drift.

I sat for some time quite close on the outside of the separation doors at the foot of the steps which led into the south-east returns, while the other gentlemen with whom I was went through, because I did not think it advisable to expose the flame of too many lamps inside. I was in the intake air in the slit close to the outside door. It had not been at all disturbed.

If the explosion had originated near these separation doors they would have been inevitably blown down and much more damage would have been done near the pit bottom.

The point at which safety lamps begin to fill with flame is when the gas mixed with the atmospheric air is rather more than one-fifteenth, or about 7 per cent., of the whole.

When it exceeds this the flame begins to explode, and lamps of the Stephenson class go out.

The gauze of a safety lamp may be blued by the enlarged size and heat of the flame before the admixture of gas in the lamp reaches the explosive point. Until this is passed the flame is longer and the combustion more rapid.

I have had to contend with outbursts of gas similar to those described by Mr. Minto in some of the collieries which I manage.

In many instances the lamps of the men have been entirely put out by them. This occurred in one case throughout a range of 400 yards.

From what I have seen of the Barnsley seam of coal, I believe that in nine collieries out of ten where there are large goaves, if you go back into them a sufficient distance you will find gas.

The quantity of gas which shows itself in these goaves is liable to be affected by various causes. A sudden increase may occur at any time from falls of the roof or from a low state of the barometer.

When these take place coincidently, it may present itself to a very dangerous extent in the workings of this seam in places where when the barometer has risen and when the falls of the roof have passed you can scarcely find a trace of it.

I do not think that this explosion could have occurred from the naked light at Thompson's box hole, on account of the large quantity of intake air passing it, but if the returns were not of sufficient capacity to carry off the gas which was emitted from a large and sudden outburst I admit it might have backed up to that point against those currents.

In my opinion, it is very important for the purpose of restricting the effects of explosions to as narrow limits as possible, that large pits like the Oaks should be worked in securely isolated districts.

The division of such a pit into such districts, and the keeping of both the intake and return air currents separate, does not involve the necessity of dividing or re-uniting those currents in the downcast or upcast shafts themselves.

The exact point where they are to be divided or re-united must depend on the particular circumstances of the case.

The district traversed by each level might be maintained in complete separation without an additional number of splits.

Too much splitting of the air would weaken and diminish to an injurious degree the volume and speed of each current.

To maintain every split in as large volume, and at as great speed as can be borne by the men working in it, is only a question of how much air you have to work upon.

I must admit, however, that it is very difficult to introduce such a system of division into a large pit like the Oaks, unless the arrangements for doing so were made when it was first opened.

William Aubone Potter.—18*th January* 1867.

I live at Monk Bretton. I am a viewer.

I have never been connected with the Oaks colliery, although I have been down the pit on several occasions previous to this accident.

I got to the Oaks on the 12th of December, soon after 3 in the afternoon. After going back to Barnsley, I returned and went down the pit a little before 5 with Mr. James Wilson of Darfield Main, and some others whose names I do not recollect.

I have read the evidence given by Mr. Wilson. All the facts in it appear to me to be perfectly correct.

From what I saw in the pit after the explosion, from prior visits, and from examination of the plans, I consider that the explosion occurred in the extreme dip workings, in one of three places, either in the dip headings at the end of the engine plane, in the banks in the dip slant, or the banks in the dip south level.

The force of the blast appeared to have come out of some of these districts, and burst into the engine plane at Thompson's box hole.

I have not been in the dip south level, nor can I say what the effects may have been in districts Nos. 12, 7, 6, and 4.

Although the bodies which we found at Thompson's box hole were both severely burnt and violently knocked about, I think they would have been more injured if the explosion had originated there.

I picked up one poor little fellow there who came from the village in which I live. His ears were burnt off. He had all his clothes on; but some of those whom we found near this point were almost naked.

I have no doubt that when this explosion occurred, all communication between Thompson's box hole and the rise part of the pit was at once cut off. It affected the main intake air currents.

The after-damp killed all in the dip north level. They fell on the other side of the overcast, which was thrown down. We found them in lots of three, ~~four~~, and five together, with their heads toward the shaft.

There was one poor man lying there with his arm across his mouth, whom I examined. His arm was bare, and the hair on it was perfect. It was evident from this that the fire had not reached him.

The after-damp was coming off very strongly at this overcast into the dip north level, showing that all the oxygen in this part of the pit had been absorbed by the explosion.

The only indication of the explosion which we observed on going down was the immense quantity of dust deposited by the action of the blast. On the table in Youle's lamp cabin it was nearly two inches thick.

At the top of the engine plane both full and empty corves were standing on the road in the usual manner.

I passed twice into the engine plane over the place which was afterwards reported to be on fire without observing it.

I think the explosion, of which the men who were in the lamp cabin have spoken, was that of the pit, and not of the shot in the new stone drift.

It appears to me utterly impossible that the flame from this shot could have fired any gas.

If the shot did not explode in the drift, but blew out on the steps side without much resistance, the sound from it would not be great. Men in the lamp cabin, where the noise of the cages in the shafts was constant, may therefore not have heard it.

The sound of the shot may have been simultaneous with the blast of the explosion, or with the falling of the cage in No. 2 shaft, or it may have been independent of either.

Assuming that Hunt and Wilson, the contractors and the shot-firer for the drift, were found on the engine plane near the top of the steps, they must, to have reached that point, have gone round 150 yards after the shot had been fired.

But it seems to me most probable that these men would first wait at the end of the drift to hear the shot go off, and would not go round this distance until, from the shot not blowing out the ramming into the drift, they supposed that it must either have missed or have blown out on the other side.

After this they would probably go round to the place where they were found, to see what effect had been produced on the steps side.

It is clear from the evidence that the shot did not blow out into the drift. This would account for the sound of the shot not having been heard in the lamp cabin, and would explain away all apparent simultaneousness between the firing of the shot and the sound of the explosion.

On my former visits to this pit I have thought the ventilation remarkably good.

It is my opinion that if there had been double the quantity of air put into this pit that this explosion might have occurred as easily as it did, if any of the large and sudden eruptions of gas to which we have heard it is liable had taken place.

If under these circumstances everything remains in good order these outbursts of gas would go away into the returns; but if by accident a lamp should be damaged, or a naked light exposed, an explosion would be produced.

When I have been down the pit before I have never observed any gas in my lamp in passing along the bank faces. No doubt there was gas in the goaves.

From the evidence it appears that the goaves generally contained fire-damp.

This gas may exist up to the margin of the goaf, while none of it is actually passing out into the bank faces or into the return air.

When goaves are in this condition gas may come out up to the faces of the banks from a fall of the roof; and when the barometer is low and falling, this tendency in the gas to present itself would be increased.

Its absence at one period in the air currents of the pit would afford no certain indication that it would not be found in them at another.

In the above state of the barometer, in addition to these sudden discharges, the constant exudation of fire-damp from the exposed faces of the coal would be greatly increased in a deep pit like the Oaks, the workings of which are contiguous to a large maiden coal field along its deep eastern boundary.

The effect of a severe explosion in a pit, the whole airways of which are connected together, would be to force, in a greater or less degree, out of the goaves the gas existing in them; and the flame would pass out through all the channels by which the intake air, affording the necessary supply of oxygen for its ignition, was entering the pit.

If at the time of this explosion there was a sudden large outburst of gas in the deep workings which could not be carried off with sufficient rapidity by the returns, it might, under these circumstances, back up against the intake air to Thompson's box hole; but, in my opinion, this, although possible, was not probable.

Prior to this explosion I should not have thought the naked light at that place to be unsafe, but I would certainly now remove it higher up the engine plane; a pit in this seam of coal being always liable to these sudden outbursts of gas.

The coal in the Oaks pit was worked by long work.

There were on the dip south and north levels and on the dip slant no less than five ranges of banks in progress, the aggregate length of which is about 1,000 yards.

In this pit, in some cases, the ranges of banks have been nearly 500 yards in length.

When a heavy top weight takes place in one of these long wall faces, the effect is the liberation of a larger quantity of gas than would be given off in working a narrow bank.

The ventilation of the goaves formed under this system of narrow work is much easier than in the long wall working.

The pack walls, which are carried to the rise as the board gates advance, prevent the roof from falling so high or the floor from bursting up in the same manner as under the long work system.

But no two collieries work under the same conconditions. It is necessary to consider the nature of the roof and that of the seam itself before a correct mode of working can be determined on.

I think it would be highly dangerous, and almost impracticable, to work the Barnsley Main coal downhill.

In this pit the areas of the goaves to the deep of the working faces are so extensive that when a sudden outburst of gas occurs it passes off invariably toward the men, and may force itself out into their working faces.

The airways of this pit were connected all round the exterior, and crossed each other in every direction without any effectual separation.

If, therefore, a great explosion occurred its effects would extend everywhere throughout the pit.

Very few men were able to escape to any distance from the places where they were at work.

In all great explosions in this district, commencing with the Old Oaks and Darley Main down to Lund Hill and Edmunds' Main, although those collieries were all worked under the narrow system, the intake air was only divided into one or two splits, which were carried from one range of banks to another, and brought into contact with naked lights after this air was loaded with fire-damp.

There is a limit to the number of shafts which can be sunk in any given area from the increasing depth of the mines in this country.

Looking at this question from a commercial point of view, their number must be restricted on account of the great cost of sinking.

The constant tendency, therefore, must be as mines become deeper, to work larger areas of coal from a pair of shafts.

If the men who work in deep, fiery, and extensive mines are to be preserved from being involved, as at the Oaks, in one wide-spread explosion, this must be effected by dividing such mines into separate districts, in each of which the ventilation shall be effectually isolated, except at those points where the splits of air leave the intake or unite again with the returns.

This would have a tendency to limit these calamities, although it might not entirely prevent them.

But I am of opinion that, with the utmost care that can be taken, these deep mines will be always more or less liable to these casualties.

All the single overcasts throughout the pit, so far as it is known, were destroyed by the first explosion. The double invert over the board gate forming part of the travelling road stood the shock which destroyed the others; but in such an explosion it is very doubtful whether it is desirable that the overcasts should stand.

In my opinion it was through repairing these overcasts and re-introducing the intake air into the extreme districts of the Oaks pit that the explosions following that of the 12th of December were caused.

As soon as it was found that no more lives could be saved, and it had been ascertained that the fire at the cupola shaft had been effectually put out, the intake air should have been allowed to go to the cupola from the downcast shafts, and the whole pit to fill up with after-damp, until it was quite certain that all standing fires were extinguished.

John Brown.—28*th January* 1867.

I live at Barnsley. I am a mining engineer.

I was connected with the Oaks colliery from 1850 to the end of 1864. Since that time I have had nothing to do with its management.

I was only down the pit once in the interval prior to the 12th of December. This was in August last, when several mining engineers and I met Mr. Ansell for the purpose of seeing his experiments on gas. We went down, and after putting up a sheet to divert the air a sufficient quantity of fire-damp was found at a great height in one of the goaves to enable Mr. Ansell to make his experiments.

I reached the Oaks Colliery a little after 3 on the afternoon of the 12th. I went down as soon as the rope on No. 1 shaft was changed.

I have either heard or read all the evidence which has been given in this case. I have nothing to correct as to any of the facts stated by the witnesses.

The farthest part of the pit I reached on the 12th was some distance beyond the second ending, in the dip north level. Mr. Platts and Mr. Smith of Lund Hill were with me there. The last body we found was at the bottom of the first ending. We found none beyond.

The air there was so charged with after-damp that I feared when we returned I should never get back to the pit bottom.

I was at the place where it has been said that there was a blower of gas, between 8 and 9 on the evening of the 12th. It was in the floor of the travelling road which passes under the engine plane. I found the floor had been on fire. I could not detect any gas although I tried for it carefully with my lamp. I found no rent in the floor, which I should have expected if there had been a large blower there. The dust was several inches deep. The floor must have been on fire. It had been extinguished, but was then so hot that I could scarcely bear my hand upon it. I directed John Sugden to have water fetched and to leave some one there to watch it during the night.

I had passed over the place twice before that evening, and seen no sign of fire. I might have done so without noticing the blower unless it had been a very large one. It is very common to find small quantities of gas issuing from the floor of a mine, which are not apparent unless they bubble up through water.

I examined the doors leading into the south-east returns. It was the second door, that is, the one nearest the returns, which was blown down. I found this door three or four yards from the place where it had been standing, between that place and the main returns. The door was splintered into very small pieces.

I think it quite impossible that this explosion could have originated in these returns.

[The shorthand writer having read that part of Mr. Potter's evidence referring to the shot, the witness said,]

I concur with what Mr. Potter has said on the subject of the shot. I have no doubt that it had been fired before Hunt and Wilson went round, and that they had gone round to see what the effect had been on the steps side.

During the time that I managed the Oaks I found that the goaves contained at times large quantities of gas, at other times not any.

Various experiments were tried under my direction by Minto in the night, when the men were out of pit, to get this gas out of the goaves.

The difficulty is to force air into a place where there is a mass of fall from the roof; to make it go over that, and down again, and come out on the other side. You cannot make the air clear out those open places where the roof has fallen 10 or 15 yards high.

I think it much safer to let the air sweep along the edges of the goaves than to attempt to disturb the gas in them. To force air through the goaves would diminish that which the men have in their working places.

The men have at times to go into these goaves to get packing stone.

The rule always is to leave their lamps outside to prevent their being injured by falls. In doing this they may on one day suffer from the gas, on another the goaf may be entirely free from it.

In my opinion it is impossible to ventilate these goaves.

I call the Barnsley Main coal a treacherous seam, from the outbursts which take place in it at various and uncertain intervals.

It is not possible to provide absolutely against these extraordinary emergencies. If the ventilation were double or treble what it is a safety lamp accidentally or intentionally injured would produce a similar catastrophe whenever an outburst occurred.

In a very fiery colliery in this neighbourhood I have been at the present time compelled to take out a summons against a man for wilfully injuring his lamp.

From my examination of the pit on the day of the explosion it is my opinion that it could not have occurred on the north side of the pit, or at the furnace, nothing having been disarranged there, and the furnace man having been found alive between the furnace and the downcast shafts.

There were no indications of the explosion in the rise workings. It is my opinion, therefore, that it originated in the dip workings to the east of the pit; either in the dip headings or in the dip slant.

I am confirmed in this opinion from the very large quantity of after-damp from those districts I found pouring out of the overcast which had been broken down in the dip north level, just on this side of the stone drift.

If there were gas in the Nos. 4, 6, 7, and 12 districts, an explosion in the dip headings or dip slant would probably carry the fire round to the downcast shafts by the south level, as well as causing it to traverse the engine plane.

The fire of this explosion has evidently been very extensive from the fact of its having reached the downcast shafts through the south level and through the engine plane.

In the previous outbursts of gas at the Oaks they did not back up in any degree on the intake air currents.

The levels by which the intake air entered the workings in Nos. 8 and 4 districts were to the deep, but it enters the dip headings and the dip slant, in one of which I think this explosion occurred, to the rise.

Still, considering the amount of ventilation passing along the main air courses in this pit, I no not see how an outburst of gas can have backed up on any naked light in it, including that at Thompson's box hole. But the circumstances in this latter case are different from those of the others, from its being to the rise of districts in which outbursts might occur.

When I first knew the Oaks pit there were 30,000 cubic feet of air per minute going through it; now there are 150,000, and I do not see any difficulty in increasing this quantity to 200,000. What has been done here has been effected by increasing the area of the returns, with the same shaft area we had formerly. There is very little friction in vertical shafts when compared with that of the underground air channels.

I differ from Mr. Potter with regard to the danger arising from the long wall system in a pit like the Oaks, where the roof is so tender, although perhaps I should not adopt that system where the roof is very strong.

We should not have above half the length of wall face open if the men would work double. The banks vary in width from 22 up to 44 yards, but the men object to work in pairs on each side the gate. They refuse to work more closely together than one pair in each face.

I consider that it would be highly dangerous and almost impracticable to work the Barnsley Main coal down hill.

The great problem for mining engineers in this district is to devise some system for working this seam of coal with more security than at present.

The constantly increasing depths at which coal is being worked must necessarily, from pecuniary considerations, tend to diminish the number of the shafts as compared with the area of the coal worked from them. It is therefore most desirable to devise some mode of securely isolating the different districts of a pit.

The object of the restoration of the overcasts after the first explosion was doubtless to get far enough into the pit to see if any one was still living, or to recover the bodies of those who were lost.

But when it became certain that no more lives could be saved, looking at the extreme danger of standing fires after such an explosion in this seam, which is so dry and ignites so easily, it probably would have been the most prudent course, as soon as the furnaces at the cupola were completely extinguished, and there was no danger of fire in the shaft, to have allowed the downcast air to have gone direct to the cupola, and the pit to fill up for a time with after-damp.

John Thomas Woodhouse.—*29th January* 1867.

I live in Leicestershire. My offices are at Derby. I am a colliery viewer; I have been in practice 35 years.

I have had great experience in fiery mines in the counties of York, Derby, and Nottingham; they are not very fiery in those of Warwick and Leicester, which are the other counties that I know best.

I was first consulted in 1848 with regard to the Oaks colliery, after an explosion, which, I believe, occurred there in 1847.

At that time the colliery was the property of the late Mr. Timothy Marshall and Mr. George Wilson, the latter of whom, I believe, has now retired from it.

There were then three shafts working, two of these were coal shafts and one a pumping shaft; one of the coal shafts was a downcast, the other an upcast. The pumps are down to an upper seam; there has been no alteration in the pumping shaft since that period.

The two coal shafts were, I believe, each 10 feet 9 inches in diameter; they were about 9 feet apart. At that time they were drawing coal up the upcast. The ventilating furnace was within five or six feet of the bottom of that shaft; I advised that the coal should all be drawn up the downcast pit, and that certain alterations should be made for that purpose.

In doing this, a great stone fell down the upcast shaft, which carried away the walling and sheeting, and the shaft began to run in.

I then recommended that this shaft should be filled up; that the other should be retained as the upcast, which it now is; and that the present downcast shafts should be sunk for drawing coal.

Several alterations were also then effected for increasing the ventilation; the furnace was moved to a distance from the upcast shaft, and I recommended that Stephenson safety lamps should be used instead of naked lights in the pit.

Many alterations have since been made, amongst others, in 1859 or '60, the dumb drift was introduced to avoid the risk of gas in the returns coming in contact with the flame, and the ventilating furnace was fed exclusively with intake air.

About two years ago Mr. John Brown gave up the management of the pit, and I, who had always been connected with the colliery in some degree, appointed Mr. Mammatt as surveyor, and to look after the ventilation and general safety of the pit under me. It was his duty to report to me from time to time.

The underground viewer, David Tewart, was appointed with my concurrence; it was his duty also to send to me periodical returns of the ventilation of the pit from the book kept for that purpose.

From the time that Mr. Mammatt and Tewart were appointed I found a general increase in the ventilation and improvement in the pit.

Mr. Dymond never interfered with the ventilation, and I believe he never ordered any important step to be taken without consulting me. I had implicit confidence in the safety of the colliery, unless some extraordinary accident occurred. I considered that the amount of air passing through this mine was perfectly sufficient for all ordinary purposes, still I was always urging upon Mr. Mammatt and Tewart the importance of continually enlarging the airways and increasing the efficiency of the ventilation.

The quantities of air passing through this pit were measured by an anemometer. I think this instrument may be used without any danger of error, because I believe it notes smaller quantities of air than what are passing.

The scheme for using gas for lighting the pit was submitted to me before it was carried into operation. At first I allowed the gas to be used at 800 yards from the pit bottom, but ultimately, after one of my visits, by my orders, these gas lights were removed from that point and not used below the top pass-by, 400 yards from the bottom.

In other collieries under my control I have taken gas down from the surface, and have used it for lighting them for a mile underground. I consider it to be safer than any other naked light; it cannot be carried about by the boys, over whom we have no control, and it is more easily extinguished.

It is my opinion that this explosion originated on the dip south level. I think it could not have taken place on the north side of the engine plane; it might however, have occurred either down the extreme dip headings, in the dip slant, or in the dip south level.

With regard to the extreme dip headings, I have not heard whether a fault which was expected to be met with there, and which might yield gas, had been struck when the explosion occurred.

In the dip slant I do not think that much working was in progress, but on the dip south level the workings were in the most active state, both as regards the number of workmen employed there, and also as to a certain state of movement or creep in the measures which must have existed in this part of the pit, but could not have occurred where the workings were in a narrower compass.

When I was first consulted with regard to the Oaks pit the coal to the deep of the shafts did not belong to the proprietors of the colliery. Purchases, agreements, or lease arrangements have been subsequently made for obtaining other pieces of coal. The engine plane has been driven gradually to the dip, and the pit has been opened out.

When this colliery was begun there was not a large field for commencing work upon; had there been, the question of other shafts to the deep would have been looked at from a different point of view. Undoubtedly the more shafts you have the more air you can get into a pit.

It frequently happens, even in very large collieries, that particular districts become exhausted before the remaining tracts of coal which are to be worked are acquired.

The surface arrangements also have to be considered; new lines of railway may be formed. When this pit was opened it was dependent entirely on the canal for the transit of coal.

I cannot give any rule as to the quantity of coal which can be worked from a pair of shafts.

The workings of this pit continue to extend in distance from the shafts, but they are not growing larger. When one district is opened out another is becoming exhausted.

From the returns with regard to the ventilation, I found the quantities of air passing through the pit constantly increasing.

On the long wall system, with the tender roof which we have in the Oaks, the roof falls constantly and closes up near to the face; but in some of the adjoining collieries, where the roof is harder and stronger, although they are working the coal on a narrower system, I have travelled back into the goaves many yards over the falls.

If it has been stated in evidence that goaves in this mine stand open 30 yards back, and that the roof falls 20 yards high, I think it must be a very exceptional case in which such a thing occurs.

I have heard of the law of the diffusion of gases, that is, of their interpenetration as soon as gases of two different specific gravities come in contact with one another; but I have not sufficiently considered that subject to say whether I fully admit its correctness or not.

In ventilation I think we should endeavour to get the largest volume of air we can up to the working faces. Any surplus beyond that should then be applied to ventilating the goaves.

I know perfectly the danger that arises in pits from large outbursts of gas and the risks incidental to a lamp in use being damaged.

I am also aware that you may search the goaves and find no gas in them at all, then comes a fall in the barometer, and gas will be found in many places.

I have seen such a thing occur on a level at a stopping made apparently air-tight; go there when the barometer is low, and you may find gas hanging about it; leave it, and return when the barometer has risen, and you will find the gas has entirely vanished.

In times past I have taken great pains to explore some of these goaves with a view of finding gas in them without being able to do so, but I have not been in the pit during the last twelve months.

I do not think that there was any possibility that this explosion occurred from any shot which was fired in the new stone drift. That shot must have been a very weak one; if there had been much resistance, and if the stone had been driven about, the effects would have been more manifest to the witnesses who examined the place.

In addition to the outbursts of gas from the roof and floor of the mine, there is a large exudation from the coal itself. This gas is discharged principally when the ends of the coal are cut through. New fissures in the coal are exposed from time to time as the faces advance.

The great rapidity with which the coal is worked in the deep part of the pit contributed to increase this exudation; and this district would be more liable to the sudden outbursts from the roof and floor in consequence of the movement and creep produced by this activity in working.

There would also be a considerable discharge of gas from the strait work which was being driven in the pit, so that not only would the ventilation have to contend with these sudden outbursts, but also with this permanent supply of gas from the coal, which would keep the air that was circulating in the mine constantly impregnated with gas up to a certain point.

About 30 yards above Thompson's box hole the main intake which comes down the engine plane and travelling roads begins to split itself into six currents, two of which go to the north, two to the south, and two continue down the plane to the dip slant and the extreme dip headings.

There might be various causes to produce a temporary obstruction in any one of these currents; and, as currents of air generally take that road which presents the freest and shortest course of egress, some of these currents might have a permanent tendency to travel in one direction rather than another.

But it is the duty of the managers so to distribute the currents of a mine as to make them run in such proportions and directions as the exigencies of any particular district, or the whole, may require. The currents might vary temporarily, but they could not vary permanently if the managers did their duty.

When this explosion occurred the air in this pit must have been in a highly explosive state, but it is perfectly possible that it may have taken place when no part of the pit was previously in that condition, except just where the gas burst out.

In my opinion the cause of this explosion must have been that there was an alarm of gas given in the pit, and that as it was no unusual thing to have these outbursts of gas in it, some unfortunate workman, the moment he heard the alarm, started off, tumbled down, injured his lamp, exposed the flame, and thus caused the explosion.

I would not attribute any such accident to any workman purposely injuring his lamp.

After what has occurred I would not again authorize the continuance of a light, even occasionly open at Thompson's box hole.

I recognize that all explosions like this must have had definite causes. It is therefore extremely necessary to investigate what those causes have been, and to see whether they cannot be removed.

It is not a question, in such a grave matter as this, as to there being at times a light either at 800 or at 400 yards from the pit bottom; but the whole system of working the coal in this pit must have the gravest consideration before the workings can be recommenced.

With regard to the safety lamps in use in the pit, I think a frequent inspection of them very desirable.

The lamps were examined carefully before they were given out in the morning to the men, and it was the duty of the deputies to examine these lamps during the day, but they had other duties to attend to as well.

Perhaps additional inspection of the safely lamps may be necessary in future.

I admit that under the late system of inspecting the lamps in this pit the injury to a lamp during the course of any day might only be detected on its being redeposited at the lamp cabin when the men went out on finishing their work.

The inspection of lamps cannot be too strict. I consider this question of lamps to be of very grave importance.

From the evidence I have seen the No. 2 jinny was explored without finding any man who had escaped so far as that from the extreme south-west district.

The top pass-by level was examined to about 150 yards beyond Jones' jinny without finding any men escaping in that level from the extreme north districts.

The only men who after the explosion had been able to travel to any distance from their work, and that was only a short distance, were those discovered by the explorers in the stone drift in the dip north level.

The men throughout the pit must, therefore, have been affected seriously in their working places to prevent their escape to any distance after the explosion.

Either the fire or the violence of the blast seems more or less to have reached every part of the pit.

The dreadful risk of these explosions, when these outbursts take place, requires the most serious consideration of the whole system of working in this pit before it is reopened, with a view to render the discharges, if possible, smaller in volume and easier to deal with when they do occur. Still at present I do not quite see how that is to be done.

I have seen discharges of gas from the floor where there were long faces of work, and also from mere corners in strait work.

A more advanced preliminary drivage of the levels, board gates, and strait work of the mine before the commencement of working would have a tendency to lessen these violent discharges, but, in a commercial point of view, operations of that kind may be so extensive that no adequate remuneration could be obtained from the amount of capital required to carry them out. Still the safety of life is the first consideration.

I thought that an issue of gas might be looked forward to as a probability when the fault was struck, which I expected would be crossed at the end of the extreme dip headings; but I had made no provision by boring or otherwise to tap that gas. I had given no orders on the subject.

The ventilation might be temporarily obstructed, but it could not be permanently diverted without the knowledge of some of the officers of the pit.

If any sudden large discharge of gas occurred, so large and so sudden that it could not pass off by the return aircourse with the returns, some part of it must back up against the intake air.

I think, however, that the velocity of the return current would probably be increased during the time this gas was passing into it.

If a very large and sudden discharge of gas occurred in the extreme dip headings, or in the dip slant, and the quantity coming away were large enough, it might back up to Thompson's box hole and flow round there both into the dip south and north levels.

In a clear track of coal the workings of a pit might be so arranged that such explosions as this would be restricted, and a great deal of the risk of their extension everywhere throughout the pit obviated.

I do not say that such a system could have been applied here, for the reasons of ownership which I have already given.

But where a clear piece of coal has to be dealt with, the working may be so arranged that, in all reasonable probability, only one district of the pit would be affected by an explosion of this nature.

By such a separation of a pit into isolated divisions the risk of such a total destruction of all the men as has occurred at the Oaks would be reduced, although it might not be altogether removed.

I recognize this question of the internal division of mines, so as to limit the extent of an explosion, to be very important, taking more especially into consideration the fact that their area in this country is constantly extending from their increasing depth.

Where the whole of a mine is worked open from one district into another, without any effectual separation, the probability is that when the violence of the outburst and the volume of the gas which is ignited are considerable, the effects of an explosion will extend to every part of the pit.

The Barnsley Main coal is very dangerous from the explosive gas it contains; but I believe that the Silkstone is, if possible, more fiery; the latter is, however, a thinner seam. The roof in the goaves does not therefore fall so high, and being more fragile and shorter in structure it falls nearer up to the face than in the Barnsley Main coal.

These large goaves constantly following up the men on the deep of their working faces are a source of danger to them as regards gas.

The ventilation in such a pit as the Oaks might at any time be overpowered by an outburst of gas; therefore, if damage to a lamp occurred coincidently with one of these sudden outbursts, an explosion would necessarily ensue.

My experience has been that this pit has become more fiery, and the outbursts of gas larger, as the workings have approached the deep.

Thomas Emerson Forster.—*29th January* 1867.

I live at Newcastle-upon-Tyne. I am a viewer.

Since this explosion I have acted and continue to act as one of the committee of mining engineers on behalf of the proprietors of the Oaks colliery.

When I arrived at the Oaks on the 13th of December the second or third explosion had occurred; I had therefore no opportunity of going down the pit.

I have heard or read the evidence given on this inquest, and I have inspected the plans of the pit.

It is my opinion that this explosion originated in the dip headings from an outburst of gas which occurred either on reaching the throw or from some other cause. I think it was fired either by a defective lamp or through some man tampering with his lamp or striking a light.

It might, however, have taken place in the dip slant.

I consider that the ventilation of this pit was quite sufficient under all ordinary circumstances.

There were 150,000 or 160,000 cubic feet of air per minute circulating through this pit, which was comparatively a small one.

Every man in it was provided with Stephenson lamps, which are the safest of all. Nothing more could be done.

In my opinion it did not require a very large quantity of gas to do all the mischief which has occurred in this pit.

If the returns were, not closed the outburst of gas could not back up against the intake to Thompson's box hole.

I consider that it is a very dangerous thing to attempt to ventilate goaves. The air should be carried so as to pass along their edges and to sweep the gas away as it comes out.

Our mines in the north of England are much flatter than they are here. This steep inclination is more likely to force gas out on to the working faces, particularly where these are are to the rise of the goaves. In the north, however, we sometimes see a good deal of gas at the edges of the goaves, especially when the barometer falls.

There are often large outbursts of gas there ; I had one at the Tyne Main colliery near Gateshead.

The workings had passed over the place four or five months when this outburst broke out in the floor of the mine. It gave out, I think, 6,000 or 7,000 cubic feet per minute, and continued for 12 months before it ceased.

JOSEPH ORGILL CARR.—*28th January* 1867.

EVIDENCE AS TO LIVES LOST.

The number of men and boys working in the pit on the 12th of December at the time of the explosion was 340.

There had been more in the pit during the morning, but they had come out before the usual time.

Of those who were brought out, 20 were then still living, but 14 of these have since died ; six only are now living.

There were 61 brought out dead, making 81 altogether.

All those of whom I have now spoken were men and boys working at the Oaks, who were in the pit at the time of the first explosion.

The number of lives lost by this explosion is therefore 334, including both those who were killed in the pit and those who have since died.

The number of lives lost by the second explosion is 27, of whom four were men working at the Oaks, and 23 were volunteers, out of 198 who went down the pit to assist.

The total loss of lives from both explosions is therefore 361.

There are still 286 bodies in the pit.

One volunteer, Samuel Brown, was brought out alive after the third explosion.

VERDICT.

That Richard Hunt and others were killed by an explosion of gas or fire-damp at the Oaks colliery on the 12th of December 1866 ; but there is no evidence to prove where or how it ignited.

The Jury think it unnecessary to make any special recommendations as to the working of mines, seeing that Government are collecting information, no doubt with a view to the better protection of life ; but they think a more strict inspection of mines desirable.

Barnsley, 31st January 1867.

EXPLANATION OF TECHNICAL TERMS.

Pit.—The underground workings.

Shaft.—The vertical opening into the pit.

Downcast.—The shaft through which the intake air descends.

Upcast.—The shaft through which the return air ascends.

Cupola.—The chimney on the upcast shaft.

Furnace.—The grates for heating the upcast shaft.

Sump.—The bottom of the shaft below the level roads into which water drains.

Intake.—The air passing from the downcast shaft to the workings.

Return.—The air returning from the workings to the upcast shaft.

Cage or Chair.—The open frame attached to the rope to receive the corves.

Corfe.—An underground coal waggon.

Level.—A main road on the strike of the measures. (In the Oaks pit three levels near and parallel to each other were usually driven, termed the deep or low, the horse or main, and the bank levels.)

Engine plane.—An inclined headway worked by a rope or ropes from a stationary engine.

Jinny.—An inclined headway down which loaded corves pass to the level, and empty corves are brought up to the workings.

Slant.—An inclined headway on the half rise or dip of the measures.

Dip headings.—The headways in the extreme deep of the pit in continuation of the engine plane.

Board gate or Board.—A road at right angles to the board or cleavage of the coal.

Ending.—A road on the end of the coal, nearly at right angles to a board gate.

Bolt hole.—A short headway on the main rise between two levels.

Slit.—A short headway on the strike or level course of the measures.

Strait work.—All narrow headways as distinguished from the bank or wall faces.

Bank or Bank face, Wall face, Working face.—The face of the coal exposed in the workings.

Goaf or Break.—That part of the pit in which all the coal has been worked out and the roof has fallen.

Long work or Long wall.—The system under which the whole of the coal is worked out at once, without leaving any intermediate pillars, in a long face or a number of continuous faces.

Narrow work.—The system under which a part of the coal only is taken away in the first operation, intermediate pillars being left for subsequent working.

Chock.—A puncheon of timber set up behind the working face to support the roof.

Packing.—A small pillar of stones to support the roof where the coal has been worked.

Pack wall.—A wall of stones to support the roof where the coal has been worked along the side of a board gate.

Overcast.—A crossing for one current of air over another, usually for return over intake air.

Undercast.—A crossing for one current of air under another.

Double invert.—A crossing for air formed by two arches, the crown of the upper being reversed on the lower.

Regulator or Scale doors.—Sliding doors to regulate the quantity of air passing.

Explanation of Technical Terms—*cont.*

Sheet or Drop sheet.—Strong canvas hung up to prevent air from passing, but to allow a passage when lifted.

Brattice or Bratticing.—A boarded partition to conduct air to the face of any narrow headway.

Top weight, Weight, or Sway.—The gradual or sudden movement downwards of the upper strata under the superincumbent weight, after the coal has been worked, before the roof breaks down completely.

Creep.—The rising up of the floor after the coal has been worked.

Fire-damp or Gas.—The light carburetted hydrogen of coal mines.

After-damp.—The residual air after an explosion of fire-damp, containing four-fifths nitrogen and one-fifth carbonic acid. It is hot and loaded with fine coal dust after an explosion.

Choke-damp.—Carbonic acid gas.

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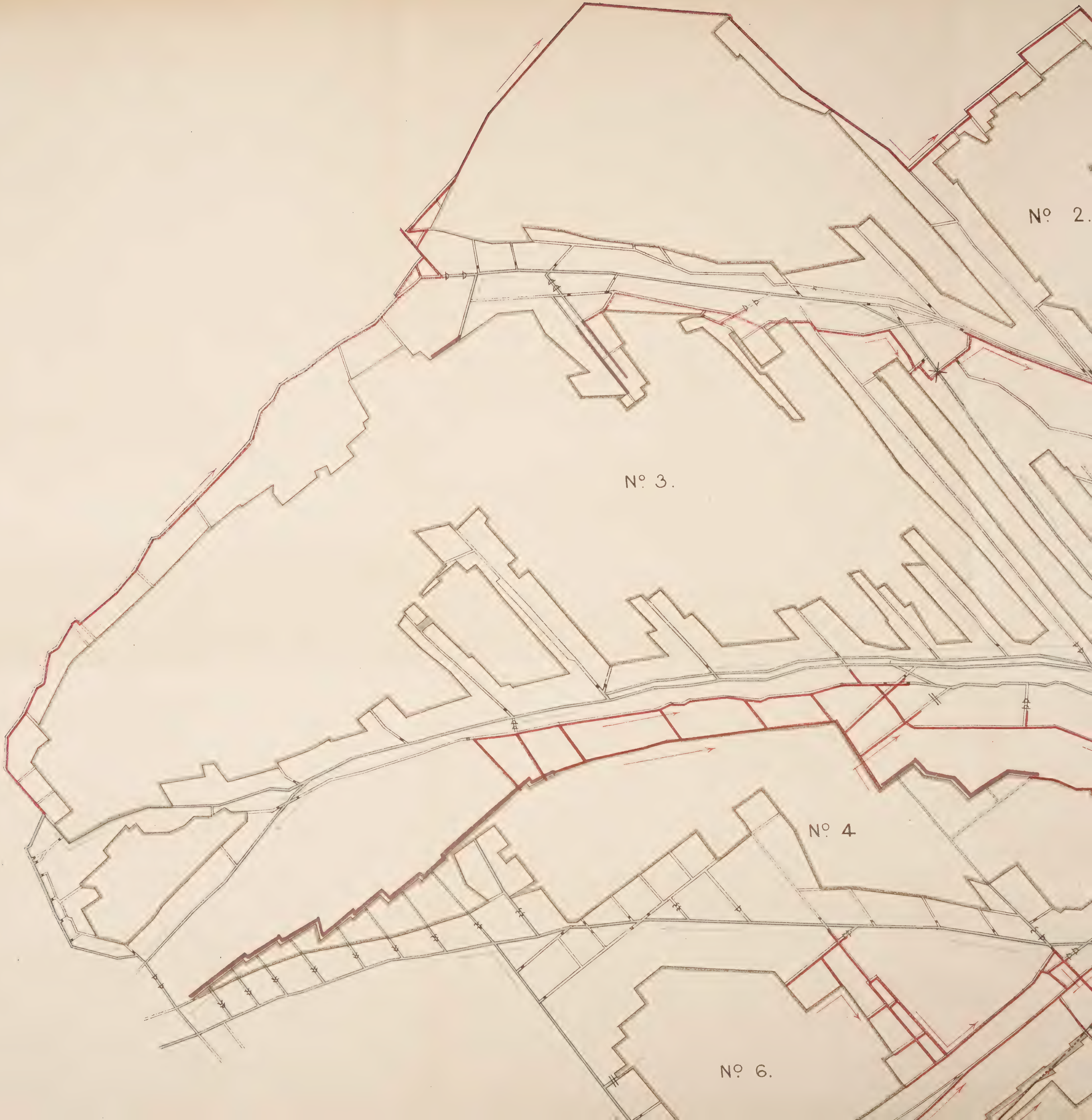
For Her Majesty's Stationery Office.

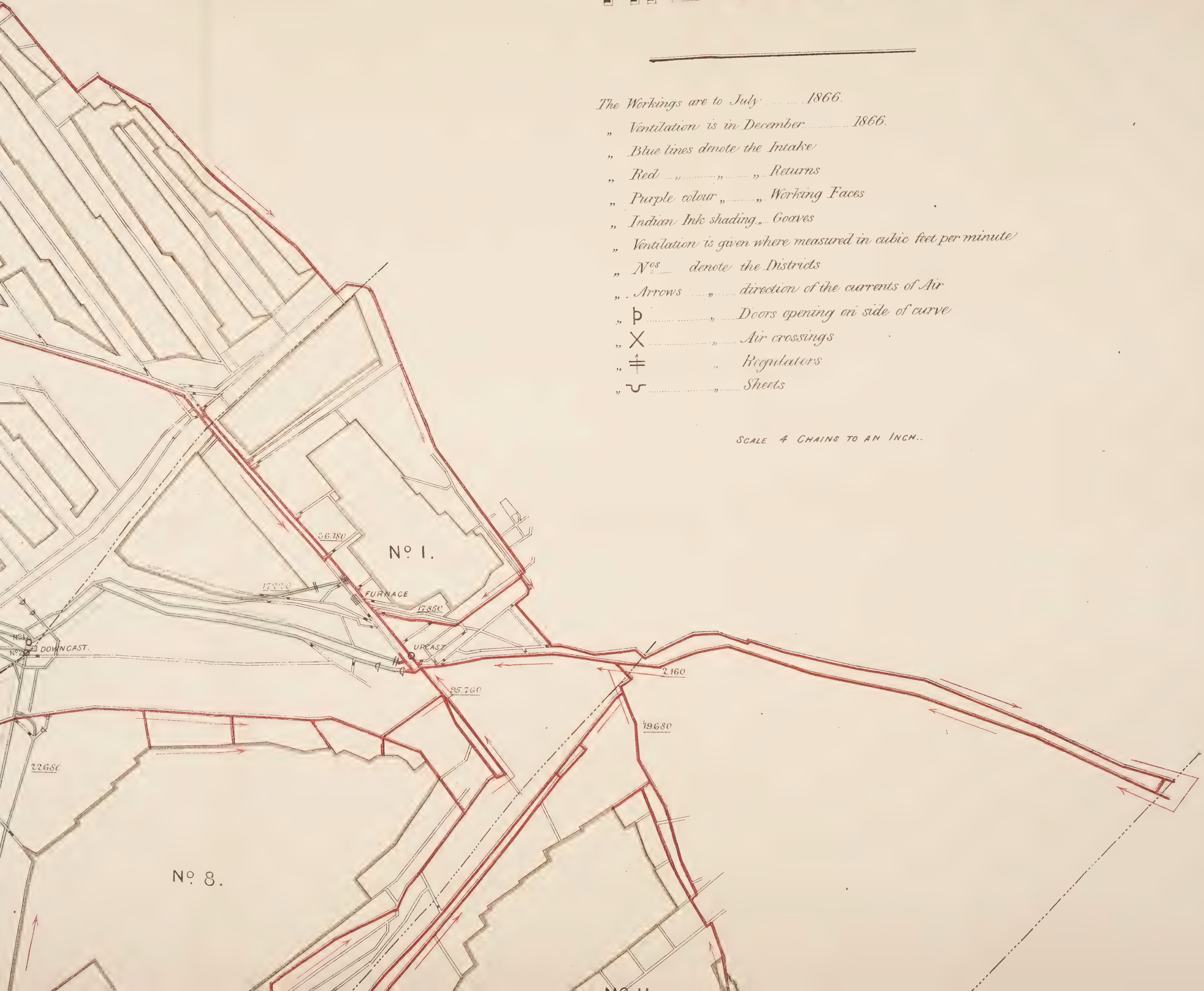

Nº 2.
Nº 3.
Nº 4
Nº 6.

Nº 1,

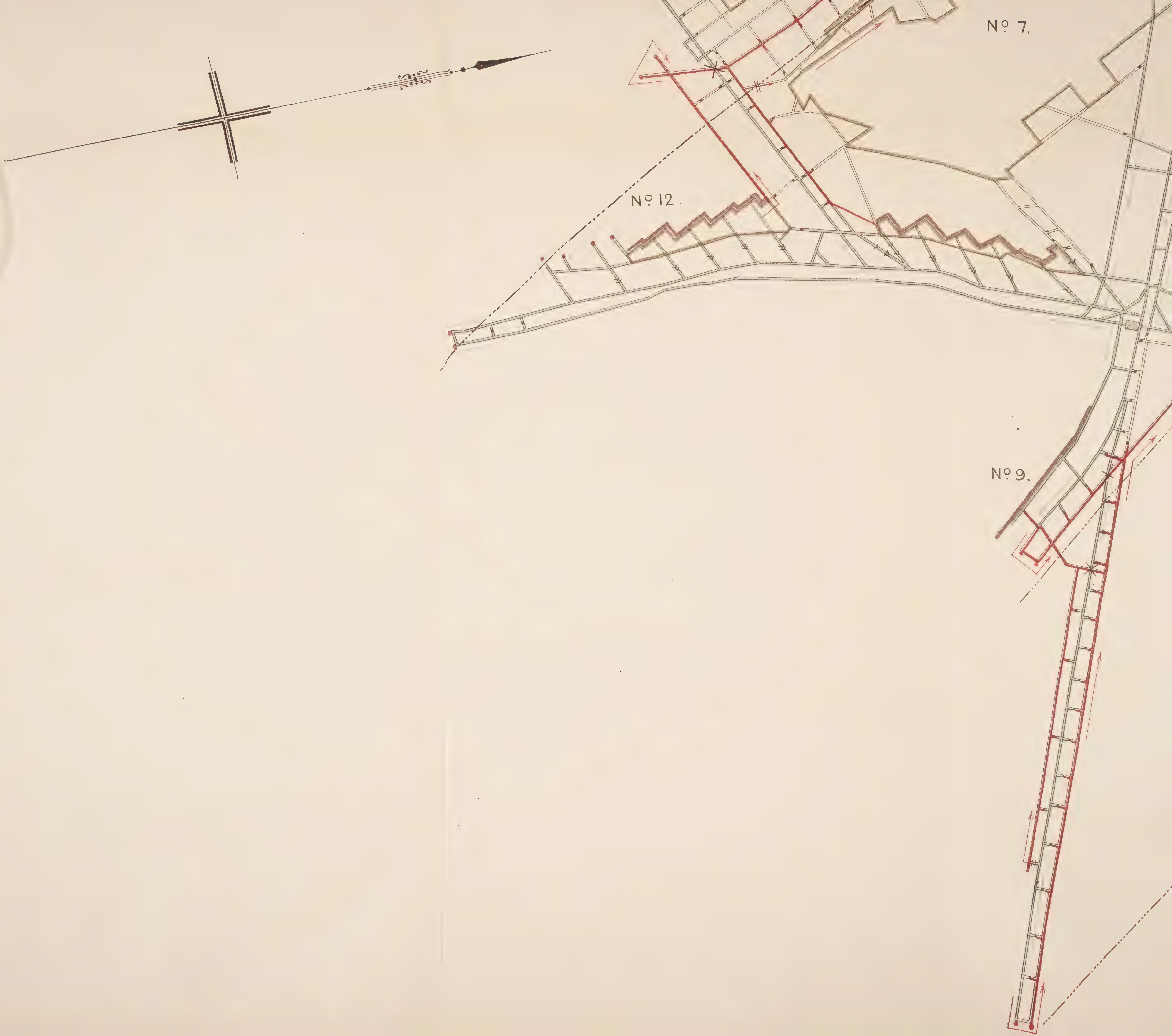
THE OAKS PIT,

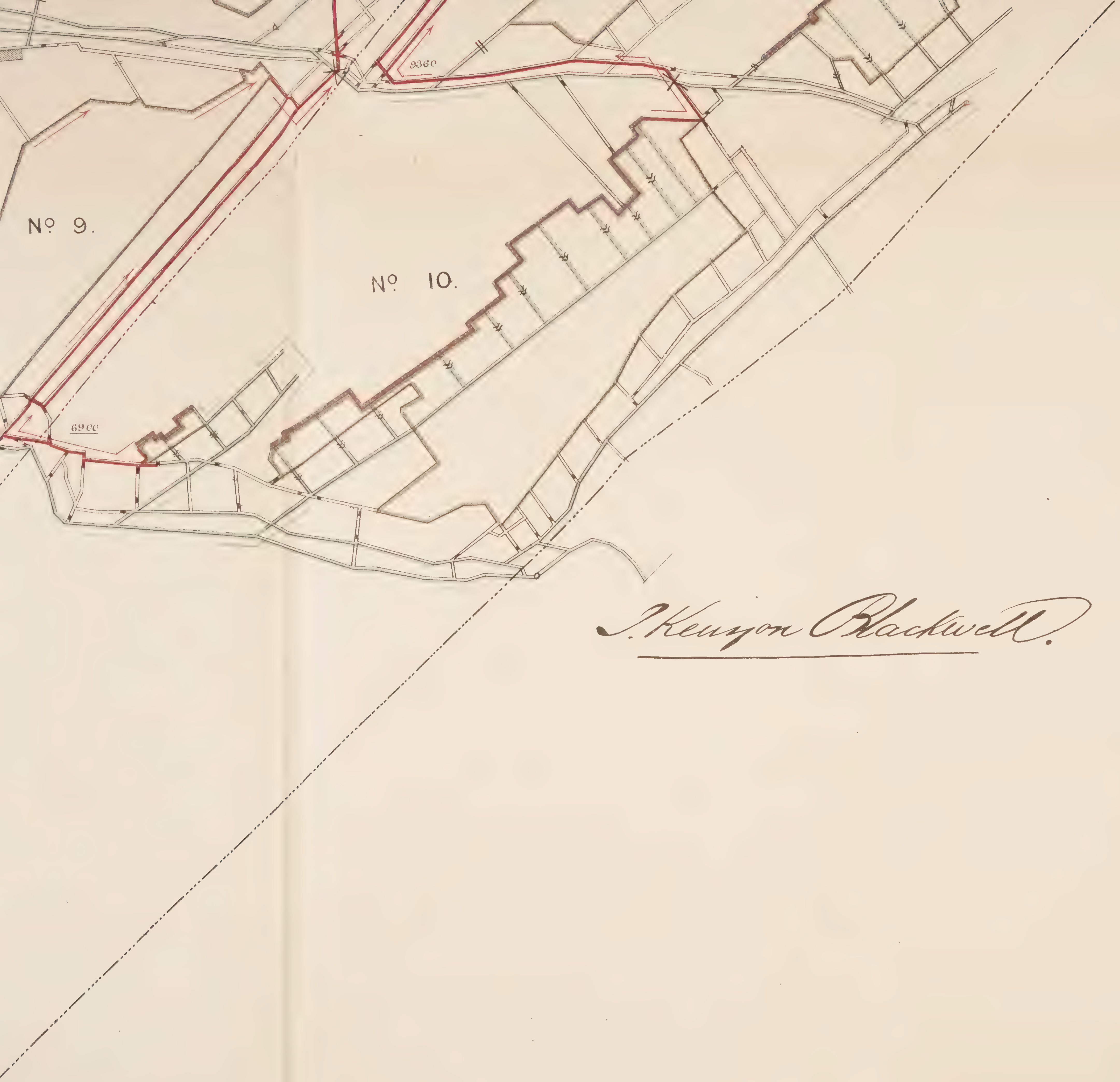
The Workings are to July ...... 1866.
„ Ventilation is in December .... 1866.
„ Blue lines denote the Intake
„ Red ... „ .... „ ...... „ .. Returns
„ Purple colour „ .... „ Working Faces
„ Indian Ink shading „ .. Goaves
„ Ventilation is given where measured in cubic feet per minute
„ Nos. — denote the Districts
„ Arrows ...... „ ...... direction of the currents of Air
„ þ .... „ ...... Doors opening on side of curve
„ × .... „ ...... Air crossings
„ ╪ „ Regulators
„ ᴗ .... „ ...... Sheets

SCALE 4 CHAINS TO AN INCH.



36.180
Nº 1.
17220
FURNACE
17.850
Nº 1
Nº 2
DOWNCAST.
UPCAST
2.160
35.760
19680
22680
Nº 8.
Nº 11

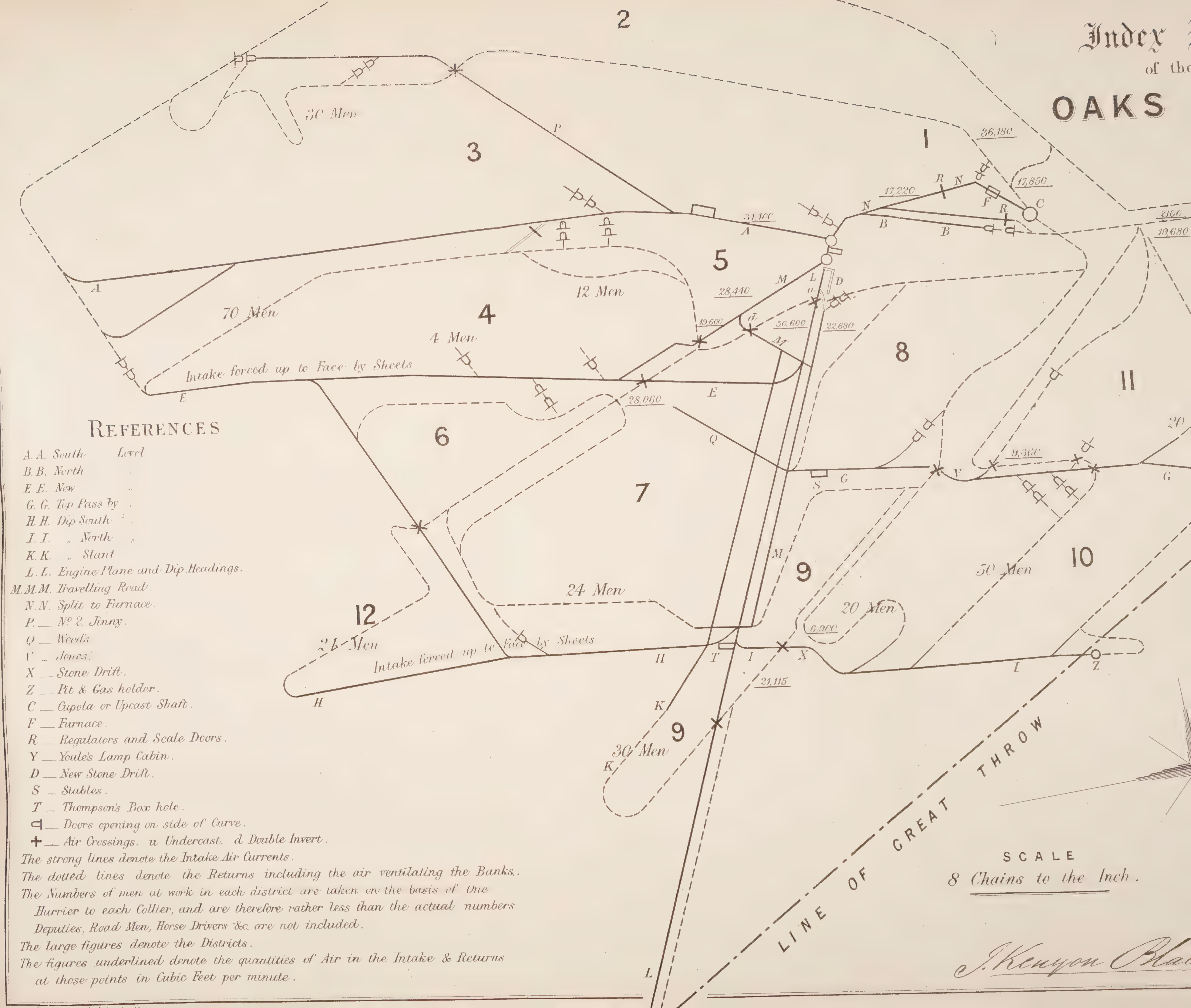

Nº 7.
Nº 12.
Nº 9.


9360
No. 9.
No. 10.
6900

J. Kenyon Blackwell.

Day & Son, (Limited) Lith. London W.C.

Index
of the
OAKS



1
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7
8
9
9
10
11
12
30 Men
12 Men
70 Men
4 Men
24 Men
24 Men
20 Men
30 Men
30 Men
20
Intake forced up to Face by Sheets
Intake forced up to Face by Sheets
36,180
17,850
17,220
31,100
3160
19,680
28,440
19,600
50,600
22,680
28,060
9,360
6,900
21,115
A
A
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B
C
D
E
E
F
G
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Q
R
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V
X
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d
u
LINE OF GREAT THROW

REFERENCES

A. A. South Level
B. B. North „
E. E. New „
G. G. Top Pass by „
H. H. Dip South „
I. I. „ North „
K. K. „ Slant
L. L. Engine Plane and Dip Headings.
M.M.M. Travelling Road.
N. N. Split to Furnace.
P. — Nº 2. Jinny.
Q — Wood's
V — Jones.
X — Stone Drift.
Z — Pit & Gas holder.
C — Cupola or Upcast Shaft.
F — Furnace.
R — Regulators and Scale Doors.
Y — Youle's Lamp Cabin.
D — New Stone Drift.
S — Stables.
T — Thompson's Box hole.
ᑫ — Doors opening on side of Curve.
+ — Air Crossings. u Undercast. d Double Invert.

The strong lines denote the Intake Air Currents.

The dotted lines denote the Returns including the air ventilating the Banks.

The Numbers of men at work in each district are taken on the basis of One Hurrier to each Collier, and are therefore rather less than the actual numbers Deputies, Road Men, Horse Drivers &c. are not included.

The large figures denote the Districts.

The figures underlined denote the quantities of Air in the Intake & Returns at those points in Cubic Feet per minute.

SCALE
8 Chains to the Inch.

J. Kenyon Bla

MINES.

REPORTS

OF

THE INSPECTORS OF MINES,

TO

HER MAJESTY'S SECRETARY OF STATE,

For the Year 1865.

Mr. DUNN.
Mr. ATKINSON.
Mr. DICKINSON.
Mr. HIGSON.
Mr. EVANS.
Mr. WYNNE.
Mr. BROUGH.
Mr. BAKER.
Mr. WALES.
Mr. MOORE.
Mr. ALEXANDER.
Mr. MORTON.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1867.

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SHOWING

The Number of Male Coal Miners Employed in and about the Coal Mines of Great Britain, the Number of Fatal Accidents and Lives Lost, the Quantity of Coal Raised, and the Proportion of Accidents and Lives Lost to the Number of Persons Employed and the Tons of Coal Raised.

Names of Districts.	Number of Male Coal Miners Employed as per Census 1861.	In the Year 1865.								
		As computed by each Inspector for his own District.		Separate Fatal Accidents.	Lives Lost by the Accidents.	Persons Employed per Separate Fatal Accident.	Persons Employed per Life Lost.	Tons of Coal Raised per Separate Fatal Accident.	Tons of Coal Raised per Life Lost.	Number of Collieries.
		Number of Male Persons Employed.	Quantity of Coal Raised.							
Northumberland, Cumberland, and North Durham	22,719	25,035	10,409,900	90	97	278	258	115,665	107,318	160
South Durham - - - - -	30,805	33,943	14,181,433	76	82	447	414	186,598	172,944	161
North and East Lancashire - -	23,525	23,525	6,312,000	61	66	385	356	103,475	95,636	258
West Lancashire and North Wales - -	24,302	27,600	8,000,000	99	117	278	238	80,808	68,965	180
Yorkshire - - - -	31,938	35,000	9,300,000	46	55	760	636	202,174	169,091	422
Derby, Nottingham, Leicester, and Warwickshire	23,434	27,089	7,575,000	74	82	366	330	102,371	92,383	205
North Stafford, Cheshire, and Shropshire - -	16,427	21,000	5,600,000	45	52	466	403	124,444	107,692	226
South Stafford and Worcestershire - -	25,235	27,000	10,201,500	79	91	341	296	129,132	112,104	542
Monmouth, Gloucester, Somerset, and Devonshire	21,762	26,658	6,000,000	56	82	476	325	107,143	73,170	225
South Wales - - -	26,292	29,076	8,531,336	118	159	246	182	72,300	53,656	338
Scattered over other Counties - - -	148									
Totals,—England and Wales - - -	246,587	275,926	86,111,169							
East Scotland - - -	18,091	21,150	6,400,000	43	47	492	450	148,837	136,170	270
West Scotland - - - - -	17,795	18,375	6,400,000	50	54	367	340	128,000	118,518	223
Totals, Scotland - - -	35,886	39,525	12,800,000							
Totals and Averages, England, Wales, and Scotland - - -	282,473	315,451	98,911,169	837	984	377	321	118,173	100,519	3,215

SUMMARIES.

SUMMARY of Separate FATAL ACCIDENTS in and about the COAL MINES of GREAT BRITAIN during the Year 1865.

NAMES OF DISTRICTS.	Explosions of Fire Damp.	Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				Gross Totals.
		Falls of Coal.	Falls of Roof.	Total Falls in Mine.	Overwinding.	Ropes and Chains breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gunpowder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Underground.	Sundries Underground.	Total Miscellaneous Underground.	By Machinery on Surface.	Boilers bursting.	Miscellaneous on Surface.	Total on Surface.	
Northumberland, Cumberland, and North Durham - -	7	14	12	26	–	–	6	4	1	1	1	–	13	1	–	–	2	11	11	–	2	27	4	–	13	17	90
South Durham - - -	2	1	20	21	–	1	5	2	–	–	–	2	10	2	–	–	–	9	7	1	3	22	4	–	17	21	76
North and East Lancashire -	6	12	18	30	–	–	2	3	–	2	–	–	7	2	2	–	–	1	3	3	1	12	4	–	2	6	61
West Lancashire and North Wales - - - -	8	8	29	37	–	3	2	2	4	2	6	–	19	2	–	–	1	3	8	1	5	20	–	2	13	15	99
Yorkshire - - - -	8	12	10	22	–	1	4	2	–	2	1	1	11	1	–	–	–	–	4	–	–	5	–	–	–	–	46
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire - - - -	2	15	21	36	–	–	3	4	2	1	–	3	13	–	1	–	1	7	6	–	1	16	2	1	4	7	74
North Staffordshire, Cheshire, and Shropshire - - -	6	9	13	22	2	1	1	2	–	2	–	–	8	1	–	–	–	2	2	1	1	7	2	–	–	2	45
South Staffordshire and Worcestershire - - -	7	29	12	41	2	–	7	5	1	1	3	2	21	1	–	1	–	–	1	–	3	6	–	–	4	4	79
Monmouthshire, Gloucestershire, Somersetshire, and Devonshire - - -	1	10	24	34	–	3	–	2	1	1	2	–	9	1	1	1	–	–	7	–	1	11	1	–	–	1	56
South Wales - - - -	6	15	40	55	–	–	1	3	1	4	4	4	17	1	2	–	–	5	17	–	4	29	3	–	8	11	118
Eastern district of Scotland -	4	4	13	17	–	2	1	5	–	–	–	3	11	1	2	1	–	2	3	–	–	9	2	–	–	2	43
Western do. -	7	8	19	27	–	–	1	1	–	2	–	1	5	–	–	–	–	–	5	–	–	5	2	1	3	6	50
Total separate fatal accidents - - in 1865	64	137	231	368	4	11	33	35	10	18	17	16	144	13	8	3	4	40	74	6	21	169	24	4	64	92	837
in 1864	59	118	262	380	5	9	32	25	7	29	15	36	158	15	8	1	3	20	56	5	9	117	14	3	46	63	777
																							Increase - -				60

SUMMARY of DEATHS caused by the aforesaid ACCIDENTS in and about the COAL MINES of GREAT BRITAIN during the Year 1865

NAMES OF DISTRICTS.	Explosions of Fire Damp.	Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				
		Falls of Coal.	Falls of Roof.	Total Falls in Mine.	Overwinding.	Ropes and Chains breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gun-powder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Underground.	Sundries Underground.	Total { Miscellaneous Underground.	By Machinery on Surface.	Boilers bursting.	Miscellaneous on Surface.	Total on Surface.	Gross Totals.
Northumberland, Cumberland, and North Durham - -	14	14	12	26	–	–	6	4	1	1	1	–	13	1	–	–	2	11	11	–	2	27	4	–	13	17	97
South Durham - - -	4	1	21	22	–	1	5	2	–	–	–	2	10	2	–	–	–	9	7	1	6	25	4	–	17	21	82
North and East Lancashire -	10	12	19	31	–	–	2	3	–	2	–	–	7	2	2	–	–	1	3	3	1	12	4	–	2	6	66
West Lancashire and North Wales - - - - -	11	8	30	38	–	10	2	2	4	2	11	–	31	2	–	–	1	3	8	1	7	22	–	2	13	15	117
Yorkshire - - - -	15	12	10	22	–	1	6	2	–	2	1	1	13	1	–	–	–	–	4	–	–	5	–	–	–	–	55
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire - - - -	9	15	21	36	–	–	3	4	2	1	–	3	13	–	1	–	1	7	6	–	1	16	2	2	4	8	82
North Staffordshire, Cheshire, and Shropshire - - -	12	9	13	22	2	1	1	2	–	3	–	–	9	1	–	–	–	2	2	1	1	7	2	–	–	2	52
South Staffordshire and Worcestershire - - -	8	35	13	48	2	–	8	5	1	1	3	2	22	2	–	3	–	–	1	–	3	9	–	–	4	4	91
Monmouthshire, Gloucestershire, Somersetshire, and Devonshire - - -	26	10	24	34	–	4	–	2	1	1	2	–	10	1	1	1	–	–	7	–	1	11	1	–	–	1	82
South Wales - - - -	45	15	42	57	–	–	1	3	1	4	4	4	17	1	2	–	–	5	17	–	4	29	3	–	8	11	159
Eastern district of Scotland -	5	4	13	17	–	3	1	5	–	–	–	3	12	1	3	2	–	2	3	–	–	11	2	–	–	2	47
Western do. -	9	8	20	28	–	–	2	1	–	2	–	1	6	–	–	–	–	–	5	–	–	5	2	1	3	6	54
Total lives lost in 1865 - -	168	143	238	381	4	20	37	35	10	19	22	16	163	14	9	6	4	40	74	6	26	179	24	5	64	93	984
Do. do. in 1864 - -	94	122	273	395	8	17	38	26	7	30	14	44	184	15	8	8	3	21	56	5	9	125	14	9	46	69	867
																							Increase - -				117

SUMMARY of Separate FATAL ACCIDENTS in and about the INSPECTED IRONSTONE MINES of GREAT BRITAIN during the Year 1865.

NAMES OF DISTRICTS.	Explosions of Fire Damp.	Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				Gross Totals.
		Falls of Ironstone.	Falls of Roof.	Total Falls in Mine.	Overwinding.	Ropes and Chains breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gunpowder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Underground.	Sundries Underground.	Total { Miscellaneous Underground.	By Machinery on Surface.	Boilers bursting.	Miscellaneous on Surface.	Total on Surface.	
Northumberland, Cumberland, and North Durham - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
South Durham - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
North and East Lancashire -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
West Lancashire and North Wales - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Yorkshire - - - -	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire - - - -	–	–	2	2	–	1	–	1	–	–	–	1	3	–	–	–	–	–	–	–	–	–	–	–	–	–	5
North Staffordshire, Cheshire, and Shropshire - - -	1	–	10	10	–	–	–	1	–	–	–	2	3	–	1	–	–	–	1	–	–	2	–	–	–	–	16
South Staffordshire, and Worcestershire - - -	–	1	1	2	–	–	–	2	–	–	–	1	3	–	–	–	–	–	–	–	–	–	–	–	–	–	5
Monmouthshire, Gloucestershire, Somersetshire, and Devonshire - - -	–	–	9	9	–	–	–	–	–	–	1	–	1	2	–	–	–	–	1	–	–	3	–	–	–	–	13
South Wales - - - -	–	–	4	4	–	–	–	–	–	–	–	1	1	2	–	–	–	–	–	–	–	2	–	–	–	–	7
Eastern district of Scotland -	–	3	–	3	1	–	–	1	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	5
Western do. -	2	1	1	2	–	–	1	2	–	–	–	–	3	1	1	–	–	–	–	–	–	2	–	–	–	–	9
Total separate fatal accidents - - in 1865	3	5	28	33	1	1	1	7	–	–	1	5	16	5	2	–	–	–	2	–	–	9	–	–	–	–	61
Total separate fatal accidents - - in 1864	7	11	32	43	–	2	8	5	–	3	–	2	20	5	2	–	–	2	3	1	–	13	1	1	2	4	87
																							Decrease - -				26

SUMMARY of DEATHS caused by the aforesaid ACCIDENTS in and about the INSPECTED IRONSTONE MINES of GREAT BRITAIN during the Year 1865.

Names of Districts.	Explosions of Fire Damp.	Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				Gross Totals.
		Falls of Ironstone.	Falls of Roof.	Total Falls in Mine.	Overwinding.	Ropes and Chains breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gunpowder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Underground.	Sundries Underground.	Total Miscellaneous Underground.	By Machinery on Surface.	Boilers bursting.	Miscellaneous on Surface.	Total on Surface.	
Northumberland, Cumberland, and North Durham	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
South Durham	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
North and East Lancashire	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
West Lancashire and North Wales	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Yorkshire	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire	–	–	2	2	–	1	–	1	–	–	–	2	4	–	–	–	–	–	–	–	–	–	–	–	–	–	6
North Staffordshire, Cheshire, and Shropshire	1	–	10	10	–	–	–	1	–	–	–	3	4	–	1	–	–	–	1	–	–	2	–	–	–	–	17
South Staffordshire and Worcestershire	–	1	1	2	–	–	–	2	–	–	–	1	3	–	–	–	–	–	–	–	–	–	–	–	–	–	5
Monmouthshire, Gloucestershire, Somersetshire, and Devonshire	–	–	9	9	–	–	–	–	–	–	1	–	1	3	–	–	–	–	1	–	–	4	–	–	–	–	14
South Wales	–	–	4	4	–	–	–	–	–	–	–	1	1	2	–	–	–	–	–	–	–	2	–	–	–	–	7
Eastern District of Scotland	–	3	–	3	1	–	–	1	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	5
Western ditto	2	1	3	4	–	–	3	2	–	–	–	–	5	2	1	–	–	–	–	–	–	3	–	–	–	–	14
Total lives lost in 1865	3	5	30	35	1	1	3	7	–	–	1	7	20	7	2	–	–	–	2	–	–	11	–	–	–	–	69
Do. do. in 1864	7	11	32	43	–	2	16	5	–	2	1	2	28	5	3	–	–	2	3	1	–	14	1	1	2	4	96
																							Decrease - -				27

Mr. Dunn's Report.

REPORT as to the MINE INSPECTION ACT in the NORTHERN DISTRICT, in the Year 1865.—By MATTHIAS DUNN, Esq.

AN ACCOUNT of DEATHS by ACCIDENT in the COLLIERIES of the NORTHERN DISTRICT, from 31st December 1864 to 31st December 1865, viz. :—

		—	In Shafts.	Explosions and Choke Damp.	Falls of Stone.	Falls of Coal.	Sundries.	Total.
1865 :								
January	4	Gilcruix Colliery - - - - - - -	–	–	–	1	–	1
,,	10	Ilsworth do. - - - - - - -	–	–	1	–	–	1
,,	12	Harton do. incline plane, crush of tubs -	–	–	–	–	1	1
,,	13	Whitehaven, fall of coal - - - - -	–	–	–	1	–	1
,,	17	Friars Goose Colliery, choke damp - - -	–	2	–	–	–	2
,,	18	South Derwent Colliery, fall of coal - - -	–	–	–	1	–	1
February	7	Throckley Colliery, fall down shaft - - -	1	–	–	–	–	1
,,	8	Netherton, crushed by tubs - - - -	–	–	–	–	1	1
,,	10	Walbottle Colliery, killed by a fall of arch -	–	–	–	–	1	1
,,	,,	W. Cramlington Railway, run over by waggon -	–	–	–	–	1	1
,,	18	Cramlington Colliery, riding on pony - -	–	–	–	–	1	1
,,	,,	Grey Southen, injured by cage - - -	1	–	–	–	–	1
,,	20	Scrimerston, shaft, killed by cage - - -	1	–	–	–	–	1
March	4	Cramlington Railway, run over by waggon -	–	–	–	–	1	1
,,	,,	Urpeth, crushed by engine above - - -	–	–	–	–	1	1
,,	8	Blaydon Main, crush of tubs - - - -	–	–	–	–	1	1
,,	17	Harton Colliery, crush of tubs on incline - -	–	–	–	–	1	1
,,	20	Washington Colliery, boy, fall of coal - -	–	–	–	1	–	1
,,	26	Garesfield, run over by waggons - - -	–	–	–	–	1	1
,,	30	Seghill Colliery, inclined plane, crush of tubs -	–	–	–	–	1	1
,,	,,	Killingworth Colliery, crush of tubs - - -	–	–	–	–	1	1
,,	,,	Garesfield, waggonway - - - - - -	–	–	–	–	1	1
	31	Backworth Colliery, crush of tubs - - -	–	–	–	–	1	1
April	10	Garesfield, crush of tubs - - - - - -	–	–	–	–	1	1
,,	11	Felling, inclined engine plane - - - - -	–	–	–	–	1	1
,,	21	Killingworth, fall of stone - - - - -	–	–	1	–	–	1
,,	23	Washington, crush of tubs, cage - - - -	1	–	–	–	–	1
,,	29	Medomsley, fall of stone - - - - - -	–	–	1	–	–	1
May	4	Blaydon Main Colliery, explosion of gas - -	–	2	–	–	–	2
,,	6	Do. do. - - - - -	–	1	–	–	–	1
		(John Clavering, Wm. Heppel, Patrick Allen)						
,,	12	South Derwent Colliery, fall of coal - -	–	–	–	1	–	1
,,	20	North Seaton Colliery, fall of stone - - -	–	–	1	–	–	1
,,	23	Monkwearmouth, engine plane - - -	–	–	–	–	1	1
June	6	Backworth Railway, run over - - - - -	–	–	–	–	1	1
,,	6	Whitehaven, death on railway - - - - -	–	–	–	–	1	1
,,	9	Usworth Pit, fall of stone - - - - -	–	–	1	–	–	1
,,	12	Flimby Maryport, fall of coal - - - - -	–	–	–	1	–	1
,,	15	Backworth, run over by waggons - - -	–	–	–	–	1	1
,,	24	Et. Castle Pit, fall of coal - - - - -	–	–	–	1	–	1
,,	27	Bebside Colliery, fell off platform surface - -	–	–	–	–	1	1
July	3	Hematite Iron Works, Whitehaven, fall of coal -	–	–	–	1	–	1
,,	7	Bebside, fall of coal - - - - - - -	–	–	–	1	–	1
,,	12	S. Benwell Colliery, fall of roof - - -	–	–	1	–	–	1
,,	,,	W. Sleekburn, death from a shot - - -	–	–	–	–	1	1
,,	14	Kibblesworth Colliery, fall of stone - - -	–	–	1	–	–	1
,,	28	Backworth Colliery, run over by waggon - -	–	–	–	–	1	1
		Carried forward - - -	4	5	7	9	23	48

			In Shafts.	Explosions and Choke Damp.	Falls of Stone.	Falls of Coal.	Sundries.	Total.
1865:		Brought forward	4	5	7	9	23	48
August	3	Monkwearmouth Colliery, boy, crush of tubs	–	–	–	–	1	1
,,	,,	Do. Joseph Appleby, do.	–	–	–	–	1	1
,,	14	S. Derwent Colliery, fall of coal	–	–	–	1	–	1
,,	16	Cowpen Colliery, do. stone	–	–	1	–	–	1
,,	17	Townley, death in shaft, fell down	1	–	–	–	–	1
September	6	Chain of apparatus at bank	–	–	–	–	1	1
		Biggs Main, waggonway, run over by waggons	–	–	–	–	1	1
,,	7	Backworth Collery, crush of water tubs	–	–	–	–	1	1
,,	11	Bedlington Colliery, do. of tubs	–	–	–	–	1	1
,,	12	Ellenborough Colliery, fall of stone	–	–	1	–	–	1
,,	,,	Killingworth Railway, run over by engine	–	–	–	–	1	1
,,	16	Ratcliffe Colliery, fall of stone	–	–	1	–	–	1
,,	20	Felling, inclined plane, crush	–	–	–	–	1	1
,,	19	Ouston Colliery, waggonway, crush	–	–	–	–	1	1
,,	21	Cowpen Colliery, inclined plane, crush	–	–	–	–	1	1
,,	21	Hilda Pit, riding on tubs, incline	–	–	–	–	1	1
,,	29	Crossby, fall of coal	–	–	–	1	–	1
October	1	Team Colliery, in shaft, getting out cage	1	–	–	–	–	1
,,	8	Dudley, boy, crush of tubs	–	–	–	–	1	1
,,	9	Felling Colliery, engine plane, crush	–	–	–	–	1	1
,,	12	Elwick Colliery, explosion of gas	–	1	–	–	–	1
,,	18	Usworth crush of tubs	–	–	–	–	1	1
,,	19	Walker Colliery, run over by waggons	–	–	–	–	1	1
,,	27	Wylam Colliery, boiler explosion, underground	–	3	–	–	–	1
,,	31	Dudley, in shaft, fell down, struck by railing	1	–	–	–	–	1
November	2	Scremerston, fall of roof	–	–	1	–	–	1
,,	3	Throckley, fell down shaft off a scaffold	1	–	–	–	–	1
,,	5	Usworth Colliery, scalded to death	–	–	–	–	1	1
,,	9	Killingworth, waggonway, run over	–	–	–	–	1	1
,,	14	Bebside, fall of coal	–	–	–	1	–	1
,,	17	Radcliffe, boy, death on shaft	1	–	–	–	–	1
,,	20	Medomsley, fall of coal	–	–	–	1	–	1
,,	21	Ellenborough, Maryport, crush of engine beam	–	–	–	–	1	1
,,	23	West Stanley Colliery, explosion	–	3	–	–	–	3
,,	28	Burradon, boy, crushed by tub	–	–	–	–	1	1
,,	29	Bedlington, fell down shaft	1	–	–	–	–	1
,,	,,	Backworth, explosion, low steam	–	1	–	–	–	1
December	4	Lambley Colliery, killed by fall of rope in shaft	1	–	–	–	–	1
,,	5	Usworth, boy, scalded to death	–	–	–	–	1	1
,,	6	Felling Colliery, boy, killed on railway, crush of tubs	–	–	–	–	1	1
,,	7	Harton Colliery, boy, fall of roof	–	–	1	–	–	1
,,	9	Talkin Colliery, crush in shaft	1	–	–	–	–	1
,,	14	Backworth Colliery, run over by waggons	–	–	–	–	1	1
,,	20	Usworth Colliery, crush of coal	–	–	–	1	–	1
,,	29	South Benwell Colliery, killed by choke damp	–	1	–	–	–	1
		Total	12	14	12	14	45	97

Newcastle-on-Tyne, 1866.

In winding up the report of fatal accidents for the year 1865, it is most satisfactory to observe that great calamities have so seldom occurred, for although the deaths amount to no less than 97 persons, and although this comprises almost every description of colliery calamities, yet the list exhibits only three cases wherein the deaths are more than single, namely, on the 17th of January, at Friars Goose, by choke damp; Wylam, underground engine boiler explosion; and West Stanley Colliery, explosion from gas, which will be particularized in due course, according to the prefixed list of deaths. One peculiarity that attaches to this list is the account of two separate cases of death by choke damp unattended by explosion, which, I may state, is very uncommon in this district, where, generally speaking, the principles of ventilation are so well understood and so generally practised. But I will first go through the list, making such observations upon each accident as demands attention without unnecessary detail; namely, 1st in shafts, comprising persons falling down shafts, injured whilst riding in shafts, getting in and out of cages, things falling down from surface upon persons, &c., &c. 2d, under head of explosions are included two persons killed by choke damp at Friars Goose Colliery, on the 17th of January; and on the 27th of October, three persons suffered death from a boiler explosion underground at Wylam Colliery, but the most important event under the head of explosions occurred at West Stanley Colliery, near Tanfield, on the 23d of November, whereby three lives were sacrificed. This case is somewhat peculiar, as it is in a district generally free from inflammable air; however, presuming too much upon this circumstance, it unfortunately happened that on the 4th of March an isolated explosion took place, whereby a death occurred, when the inquest disclosed the fact that the colliery ventilation was deficient, inasmuch as the want of a furnace or some other effective means of producing a current of air, with the use of naked lights, produced the aforesaid results.

In consequence of this a serious warning was given at the inquest to adopt a furnace in the upper seam as most convenient, and that without delay. The position of this colliery was the distinguishing line of demarcation between Mr. Atkinson's district, inspector for South Durham, and that of myself for the Northern district. The position for the furnace being in Mr. Atkinson's district, and the place of the accident in mine (the colliery having been formerly visited both by Mr. Atkinson and myself), preparations were made for the erection of the said furnace, and pressing orders given to hasten it on with all speed, which was duly promised, but unnecessarily procrastinated till the 23d of November, when a more extensive explosion took place in the working of some pillars of the Hutton seam, by which several persons were so severely burnt and injured, three of whom eventually died.

When the furnace was completed and safety lamps introduced, the colliery was then placed in a satisfactory position as to safety.

Under the head of explosions are two cases of choke damp; the first, January 17th 1865, took place in Friars Goose Colliery in a drift near the engine shaft within a few fathoms of the surface; the drifts were quite without active ventilation, notwithstanding which two of the intelligent people ventured in, and fell victims to the insidious effect of the carbonic acid gas, being suffocated before aid could be rendered.

A similar case occurred at the South Benwell Colliery on the 29th December, Mr. Cochrane Carr, owner. The ventilation was dependent upon a coal and fire clay drift brought from the surface near the side of the river and the old pillar workings of the Charlotte pit (a part of the process being the sinking of a staple pit of three fathoms incomplete), when one of the poor fellows descending the said staple pit, was there suffocated by the choke damp.

Another case, material to be noticed, took place at Wylam Colliery on the 27th of October by the blowing up of an underground engine boiler, by which three persons lost their lives. The circumstances of the case were thoroughly investigated, both as to the strength and condition of the boiler, as also the provisions for safety, but no other conclusion could be arrived at except the probable deficiency of water, therefore a verdict of accidental death was recorded.

May 4th, a serious explosion occurred at Blaydon Main Colliery, Messrs. Ramsay and Co. owners, under peculiar circumstances involving the death of three persons, James Clavering, William Heppell, and Patrick Allen. In the Five Quarter seam of coal some preparations were going on for changing the passages and in forming an inclined plane, which would eventually shorten the distance of travel for the people; but as the change was not complete a partial stoppage was applied in the meantime, and due notification given thereof; notwithstanding this, one of the three men took a naked light through these forbidden places, and an explosion took place, the result of which instantaneously killed one man, the others dying of severe injuries, being struck by the effect of the explosion.

On the 29th of November an explosion occurred in the New Pit at Backworth Colliery, in the Harvey seam; this seam has recently been sunk, too, and was lying open with bratticed air, from the seam above (forty fathoms), and most unguardedly was using naked lights, when an explosion occurred, occasioning the death of one hewer. Safety lamps were immediately introduced, but a verdict of accidental death was recorded. All the other casualties are recorded as single deaths under their respective heads, and not demanding any special notice.

At the commencement of the year 1865, many of the collieries in my district were wanting in the salutary provisions of second shafts, according to the Act of Parliament, 1862, but I have the satisfaction of reporting that they are nearly all completed, having gone through the process of arbitration, as the following lists exhibits :—

REFERENCES respecting SECOND SHAFTS, with periods allowed for completion.

Date of Period.	Colliery.	Submission.	Allowed.	Remarks.
1864	North Seaton - -	August 30th - -	3 years -	
	Coanwood - - -	September 2nd -	19 months -	From January 1st
	Bolton - - -	November 2nd -	4 ,, -	,, ,, 1st 1865
	Backworth - -	December 13th -	6 ,, -	,, ,, 1st
	Coxlodge - - -	,, 17th -	11 ,, -	,, ,, 1st
	Fenham - - -	,, 21st -	8 ,, -	,, ,, 1st
	Scremerston - -	,, 22nd -	18 ,, -	,, ,, 1st
	Fletcher & Co. - -	January 31st -	12 ,, -	,, ,, 1st
1865	Charlotte - - -	,, 23rd -	12 ,, -	
	Acomb - - -	,, 19th -	12 ,, -	
	Stella - - -	,, 23rd -	18 ,, -	

N.B. All of the above are not yet completed:—Acomb, North Seaton, Coanwood, Stella.

Ironstone Mines.

Under this head I have nothing to report, inasmuch as no mines of ironstone are worked in my district, otherwise than the thin layers produced in the working of coal.

In conclusion, I beg to submit a general statement of the whole of the district, as drawn up and transmitted to me by Mr. Baker, mine inspector for Staffordshire, and secretary to the inspectors.

MATTHIAS DUNN,
Northern District.

Mr. Atkinson's Report.

REPORT on the INSPECTION of MINES in the SOUTH DURHAM INSPECTION DISTRICT, from the 31st December 1864 to the 31st December 1865.—By JOHN J. ATKINSON, Esq.

SIR, Chilton Moor, Fence Houses, February 27, 1866.

As Inspector of Mines for the South Durham Inspection District, I have the honour to report to you, with reference to the year ended 31st December 1865, as follows:—

The following Table exhibits the number of fatal accidents of different kinds, and the number of deaths that have resulted from them, in and about the coal mines of the district, in each of the years 1861, 1862, 1863, 1864, and 1865; the last being the year to which this Report has reference.

Table of accidents deaths during fiv years.

	Number of Separate Accidents.					Number of Deaths resulting.				
	Year.					Year.				
	1861.	1862.	1863.	1864.	1865.	1861.	1862.	1863.	1864.	1865.
EXPLOSIONS OF FIRE-DAMP -	1	2	1	2	2	1	2	1	3	4
FALLS OF COAL AND STONE.										
Falls of coal - - - - -	3	2	5	–	1	3	4	5	–	1
Falls of stone - - - - -	27	16	35	30	20	27	16	35	30	21
Total falls in mine -	30	18	40	30	21	30	20	40	30	22
IN SHAFTS.										
Overwinding - - - - -	–	1	–	–	–	–	1	–	–	–
Ropes or chains breaking - -	–	–	1	–	1	–	–	2	–	1
Whilst ascending or descending -	3	–	3	–	5	4	–	6	–	5
Falling into shaft from top - -	–	–	1	3	2	–	–	1	3	2
Things falling from top of shaft -	–	–	–	2	–	–	–	–	2	–
Falling from part way down -	3	3	1	5	–	3	3	4	6	–
Things falling from part way down	–	–	–	–	–	–	–	–	–	–
Sundries in shafts - - -	3	–	1	5	2	3	–	1	5	2
Totals in shafts - -	9	4	7	15	10	10	4	14	16	10
MISCELLANEOUS UNDERGROUND.										
Explosions of gunpowder - -	1	–	–	–	2	1	–	–	–	2
Suffocation by gases - - -	–	–	–	–	–	–	–	–	–	–
Irruptions of water - - -	–	–	–	–	–	–	–	–	–	–
Falling into water - - -	–	1	–	–	–	–	1	–	–	–
On incline and engine planes -	5	6	9	5	9	5	6	9	5	9
By trams or tubs underground -	14	14	11	16	7	14	14	11	16	7
By machinery do. - -	–	–	–	2	1	–	–	–	2	1
Sundries underground - -	–	2	–	1	3	–	2	–	1	6
Total miscellaneous underground	20	23	20	24	22	20	23	20	24	25
Total underground - - -	60	47	68	71	55	61	49	75	73	61
ON SURFACE.										
By machinery on surface - -	2	1	3	3	4	2	1	3	3	4
By boilers bursting on surface -	–	–	–	2	–	–	–	–	6	–
By sundries on surface - -	13	6	10	7	17	13	6	10	7	17
Total on surface - -	15	7	13	12	21	15	7	13	16	21
GROSS TOTALS -	75	54	81	83	76	76	56	88	89	82

Ironstone mines.

There are scarcely any ironstone mines under the operation of the Inspection Act in the district, and no fatal or other accidents have been reported as occurring in them during the past year.

Remarks on the preceding tabular statement as to explosions of fire-damp.

An examination of the preceding tabular statement shows that during the year 1865 only two fatal accidents have resulted from explosions of fire-damp in the coal mines of the district; one of these explosions caused the death of a single person only, and the other caused the deaths of three persons, making a total of four lives lost by explosions of fire-damp during the year.

Falls of coal and stone.

The deaths resulting from falls of stone and coal in the mines of the district have been considerably fewer in number during the past year than on the average of the four preceding years in the proportion of 22 to 30.

Shaft accidents.

The deaths from shaft accidents during the past year have been one less in number than those which resulted yearly upon an average of the preceding four years from the same class of accidents in the district.

Miscellaneous underground accidents.

The deaths from miscellaneous causes underground have been rather more numerous during the past year than they were on the average of the four preceding years embraced by the table, the numbers being in the proportion of 25 to 21¾.

Deaths from accidents on the surface.

The deaths from accidents on the surface, at and about the mines of the district, have been considerably more numerous during the past year than on the average of the four preceding years included in the tabular statement.

Number of deaths.

Upon the whole the deaths from accidents in, at, and about the coal mines of the district have been rather more numerous during the past year than they were upon the average during the preceding four years, the numbers being 82 for the past year, and an average of 77¼ per year during the preceding four years, respectively.

It may, however, be observed that the past year contrasts favourably with the two years immediately preceding it; in 1863 there were 88, and in 1864 there were 89 deaths from accidents in the coal mines of the district; but during the last year, 1865, the number of deaths has only amounted to 82.

Accidents fatal to more than one person.

There are only three accidents to report as having proved fatal to more than one person during the past year in the district.

One of these accidents was a fall of stone, which proved fatal to two persons, at Thornley Colliery; a second was the bursting of an underground boiler at Haswell Colliery, which caused the deaths of four persons; and the third and last of the accidents, which proved fatal to more than one person, was an explosion of fire-damp in one of the shafts at Thornley Colliery, which caused the deaths of three persons.

Detailed list of accidents in the district.

A detailed list of the fatal accidents that have occurred in, at, and about the coal mines of the district, during the past year, 1865, is appended to this report.

Summaries of accidents and deaths in each inspection district.

Prefixed to this report there are also classified summaries of the numbers of fatal accidents, and of the deaths resulting from them, in, at, and about the coal mines and such of the ironstone mines of the district as come under the operation of the Inspection Acts, distinguishing each of the 12 inspection districts into which Great Britain is divided.

There is also prefixed to this report a "return" showing the computed number of male coal miners employed in and about the coal mines of Great Britain, the number of fatal accidents, and the number of lives lost by those accidents; and also showing the quantity of coal raised in each of the twelve inspection districts.

This "return" also exhibits the number of tons of coal raised, and the number of persons employed, for each fatal accident and for each death resulting, distinguishing the twelve inspection districts.

The following extracts from the return shows that the South Durham inspection district contrasts favourably with the whole of Great Britain as regards accidents and deaths in the coal mines.

	Totals and Averages.			Totals and Averages.	
—	South Durham Inspection District.	England, Wales, and Scotland.	—	South Durham Inspection District.	England, Wales, and Scotland.
1861.			Lives lost by the accidents -	82	984
Number of persons employed, as per Census Tables.	30,805	282,473	Persons employed per separate fatal accident.	447	377
			Persons employed per life lost by the accidents.	414	321
1865.					
Computed number of persons employed.	33,943	315,451	Tons of coal raised per separate fatal accident.	186,598	118,173
Computed quantity of coals raised.	14,181,433	98,911,169	Tons of coal raised per life lost by the accidents.	172,944	100,519
Separate fatal accidents -	76	837	No. of collieries - -	161	3,215

Fatal explosions of fire-damp.

No. 45 accident; explosion of fire-damp at Trimdon Colliery.

Of the two explosions of fire-damp that have proved fatal to life in this inspection district, during the year 1865, the first occurred at Trimdon Colliery, on the 9th of June, and caused the death of one person only, George Cook, a rolleyway man, 59 years of age; this explosion was, however, immediately preceded, accompanied, or immediately followed by such extensive falls of roof as to shut in, and prevent for several hours, the egress of nine workpeople employed in a portion of the mine lying beyond the place where the explosion of fire-damp and the falls of roof took place; but they were all finally rescued from their unpleasant position comparatively uninjured.

This explosion occurred in the Five Quarter Seam of coal, being the uppermost of three seams being worked at the time.

The Five Quarter Seam of coal at Trimdon Colliery gives off a very small proportion of fire-damp, and is much more prolific in carbonic acid gas or stythe.

The roof of the Five Quarter Seam of coal is of a very tender and friable character, consisting of a seam of inferior coal, interlarded with bands of stone, and known as the Three Quarter Seam, owing to which circumstance large open spaces are left, by it falling, in the principal roads of the mine, above the level of the roads themselves; and these vacancies, in many parts, are shut off from the air currents beneath, by the lofting of timber put in to prevent accidents from further falls of roof from above the vacant spaces.

In the Five Quarter Seam of coal at Trimdon Colliery there is one principal road or way leading northwards from the shaft, through which the fresh air is conducted into the workings and the coals brought to the shaft.

Near the shaft this principal road is in the next lower workable seam, the Main Coal Seam; after which it is in a stone drift passing upwards to the Five Quarter Seam, at a fault or slip dyke.

The coals from the Five Quarter Seam are brought down a self-acting inclined plane to the Main Coal Seam, at the fault, and afterwards drawn to the shaft, up an engine plane in the Main Coal Seam itself.

At a distance of about 1,100 yards from the shaft, on the principal north way, in the Five Quarter Seam of coal, there is a branch way leading to a district of workings lying at some distance to the westward from that point, and known as the T. L. way or district of workings. This district, at the time of the accident, was being worked in the broken or pillars, exclusively by means of safety lamps, as is customary under such circumstances; and, although it was in this district that the nine persons were shut in by falls of stone on the road leading from it to the shaft, it is evident that the explosion did not occur in the district from the facts that no fire was observed there, and that safety lamps alone were in use, and that the nine persons shut in by the falls of stone all escaped without having seen any fire.

There was only another district being worked in the Five Quarter Seam of coal at the time when the explosion took place; this other district was known as the Bank-Top way, and was situated at a distance of about 790 yards eastward from the principal north road; the road leading to it diverging from the principal north road at a distance of about 360 yards from the shaft, near the top of the self-acting inclined plane connecting the two seams of coal at the fault already mentioned. The Bank-Top way was being worked on the pillar and stall system, in the whole mine, and naked lights were employed in it at the time of the explosion; but, since no fire was observed in this district, and all the persons employed in it escaped uninjured, it is evident that the explosion did not take place in it.

There were two other connections, by means of staples, between the Main Coal and the Five Quarter Seams, but I could see no reason to suspect that the gas which had been ignited had come up either of these staples, from the Main Coal to the Five Quarter Seam.

Probable cause of the explosion at Trimdon Colliery.

After a careful inspection of the mine, and consideration of all the facts, circumstances, and conditions, in connexion with the case, I felt convinced that the gas which exploded had been suddenly discharged into the intake current of air, in the principal north way, and had been ignited at the oil lamp used by Cook, the rolleyway man.

I am of opinion that the gas had been lodging in some of the vacancies left by the falls in the upper parts of the principal north way, and that it had been suddenly displaced and mixed with the intake current of air by one or other of the large falls of roof which were found after the explosion.

My reasons for arriving at these conclusions may be shortly and generally stated, as follows:

1. No one in the mine, so far as I ascertained, had been scorched, nor had even seen any fire, excepting George Cook, the rolleyway man, who was the person that lost his life.

2. In one of the working districts of the mine no naked lights were used, and in both districts some of the workmen continued to prosecute their labours until they were informed that an explosion had taken place, and were requested to desist and leave, in consequence.

3. The only probable source of the fire-damp that I could find was in the hollows and spaces in the roof, at and near to where the falls had taken place in the rolleyway.

4. In the main coal seam there were no signs of fire, and but slight indications of a gust of wind, which would, however, naturally result from an explosion of fire-damp in the Five Quarter Seam, through the medium of the staples.

5. The body of the deceased, George Cook, was found about half a mile from the shaft, upon the principal north way, considerably scorched, and with other signs of an explosion of fire-damp having occurred at the place.

From the fact of the timber, grease, and coal, near the place where the body of Cook was found, exhibiting little or no appearances of scorching, and only moderate appearances of dusting, chiefly upon the northern side, I think it probable that the fall of stone near the T. L. way end had first occurred, and liberated the gas, which had been ignited by the naked light carried by Cook, and had, by the concussion due to its explosion, caused the other falls of roof further outwards in the rolleyway.

Since the occurrence of this small explosion certain precautionary measures have been recommended by me, and adopted by the agent of the colliery.

The peculiarity of the case is that the explosion occurred in, and was confined to, the intake airway, upon one of the principal thoroughfares of the mine.

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The other fatal explosion of fire-damp which has occurred in this inspection district, during the year 1865, took place at Thornley Colliery on the 23d of August, and caused the deaths of three persons.

About nine o'clock on the evening of the 23d of August 1865, while two brothers, shaftmen, named respectively George and Liddell Wallace, were engaged in putting a new slide into the south shaft, at Thornley Colliery, this explosion of fire-damp occurred. It took place, according to a statement made by Liddell Wallace, at his light; and so injured himself and also a third man, named Matthew Hewitson, that they both died after the occurrence. George Wallace was precipitated down the shaft, and found dead there, as soon as the bottom of the shaft, at the Harvey Seam, was reached, after the explosion. Considerable injury was done to the brattice and other timbering in the shaft, near the Low Main Seam, where the explosion occurred, and for a distance of about 10 fathoms upwards from that point. About one or two feet below the Low Main Seam, a horizontal scaffold or platform had occupied upwards of one half of the area of the shaft, and as it was a little below the level of this platform that Liddell Wallace was engaged at the time of the occurrence, it seems to be highly probable that the gas which exploded had been lodging underneath this scaffold, where it would be sheltered from the force of the current of fresh air descending the shaft, which acted as a down-cast channel for the air ventilating the abandoned Harvey Seam, lying about 44 fathoms lower down the shaft. I cannot ascertain that gas had ever been observed underneath this scaffold before the explosion occurred; but my own observations, made in the Harvey Seam, at the bottom of the shaft, since the accident, together with more recent occurrences, satisfy me that the gas had really ascended the shaft from the Harvey Seam, against the down-cast current of air, from the Harvey Seam, and had found lodgment and shelter underneath the scaffold. The working of the Harvey Seam, which was well known to generate fire-damp, had been abandoned for about five years, and from time to time, during that period, water has been allowed to flow into the dip workings until they have become filled or drowned. In the interval the workings have been ventilated, along the outskirts of the rising water, while the workings to the rise of the shaft have been ventilated only to a moderate distance from the shaft. Recently, however, the rising water has reached to within so short a distance of the bottom of the shaft, that, on my inspecting this abandoned seam on the 25th August, about two days after the explosion, I found the fire-damp on the dip side of the shaft, at a distance of only about 10 feet from the edge or lip of the shaft. On Monday evening (the 28th of August) a sudden discharge of gas took place from the Harvey Seam into the shaft; and on Sunday morning, the previous day, there was also a sudden discharge of gas, which fouled the main intake in the Harvey Seam. These sudden discharges of fire-damp lead me to suspect that the water, in its gradual accumulation in the dip workings of the Harvey Seam, had not filled the whole of the excavations above the ordinary level of the seam, but had enclosed air or fire-damp in some of them, and that, from time to time, as the pressure of the atmosphere became reduced by a fall of the barometer, or as the fire-damp by long continued generation, acquired sufficient force, it suddenly overcame the pressure of the water by which it was confined, and came out towards the shaft in sudden eruptions in the form of a water-blast, and on entering the shaft, overcame for a time by its levity the force of the down-cast current, and so ascended the shaft. I cannot ascertain from any of the agents of the colliery that the fire-damp of the Harvey Seam had been observed to be discharged in the sudden manner just named until immediately before and since the occurrence of the accident, which I suspect to have arisen through such a sudden discharge. Naked lights had been in use at the Low Main Coal Seam onsetting, close to the shaft, for a very long period, and had these sudden discharges of fire-damp into the down-cast shaft been long in existence, there would probably have been an explosion of it at an earlier period; and hence I conclude that they had only recently commenced to take place. This change probably arose from the drowning of the workings, by the rising and accumulation of the water in the neighbourhood of the shaft, so as to cut off the ordinary routes pursued by the air currents ventilating the Harvey Seam. Unless I had previously observed that sudden discharges of gas had made their appearance in the air courses near the edge of the rising water, while at a distance from the shaft, I should not have thought it likely that they should commence to take place when the water rose to its nearness to the bottom of the shaft at the time of the accident; but I must remark that I think it would have been very much more safe and creditable management had the water never been allowed to rise to within so short a distance of the shaft, as it was at the time of the accident. And since it was allowed to do so, I think that more frequent examinations of the state of the ventilation of the Harvey Seam ought to have been made than I can ascertain to have been made. Had the gas, however, only been discharged in an ordinary and gradual manner, and not in sudden gusts, I am of opinion that it would never have ascended the down-cast shaft against the descending current of air, but that it would have mingled with the intake and return air currents, and have been discharged up the upcast staple, and so into the upcast shaft without coming into contact with any unprotected lights until after it was diluted with air, and rendered inexplosive; and if the agents of the colliery were not aware that the gas was given off in sudden and violent eructations, this may have been the idea entertained by them up to the time when the explosion occurred.

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It may be observed that each of the two fatal explosions of fire-damp which occurred during the past year in this inspection district took place in positions where, in general, they are least likely to happen; one in a main intake airway, and the other in a down-cast shaft, evincing that careful examinations of all parts of the workings of mines ought to be made from time to time, whether suspected to contain or be liable to influxes of fire-damp or not; and the explosion in the Thornley downcast shaft shows that care should be taken to prevent the too near approach of dangerous gases, accumulated in abandoned seams, to working shafts, as, if they reach such shafts, they may produce fatal effects.

Slight, loc
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damp.

In addition to the two fatal explosions of fire-damp in the district during 1865 there have been three persons scorched by as many separate slight and local explosions of fire-damp, one at Hedley Hope Colliery, and another at Wooley Colliery, both belonging to Messrs. Joseph Pease and partners, and a third at Wingate Grange Colliery, belonging to the executors of the late Mr. John Gulley.

Falls of stone and of coal.

In this inspection district 21 deaths have resulted from falls of stone, and one from a fall of coal, during the past year, making a total of 22 deaths from such falls. The number of deaths resulting from similar falls amounted upon the average of the four preceding years to 30 per year.

The avocations of the persons to whom this class of accidents has proved fatal during the past year, were as follow:—

		Number of Deaths.
Deputy overmen - - - - - - -		3
Hewers of coal, falls of stone - - - -	14	
Do. fall of coal - - - -	1	
		15
Shift workmen, falls of stone - - - - -		2
Drivers do. - - - - -		2
		22

Dangerous employment of deputy overman.

The occupation of deputy overman is perhaps one of the most dangerous in mines, particularly where pillar workings are in progress and where the roof is bad. One great danger to which workmen of this class are exposed consists in the liability of stone to fall upon them while they are employed in withdrawing the props and other timber used to support the roof of the mine after the coal has been worked away.

I have, from year to year, remarked in my reports, upon the great excess of fatalities amongst this class of workmen compared with that amongst other classes of miners in this district, and I am glad to have the honour of reporting a marked diminution of this excess, during the past year, as compared with previous years.

Shaft accidents.

No. 1 accident.

At Hunwick Colliery on the 9th of January 1865 Richard Curry, a driver underground, got into the shaft cage, amongst other boys, to descend to his employment about 6 a.m.; immediately after the cage started to descend, his arm, which appears to have been projecting, was squeezed by the cage against the erections at the top of the shaft, and he died from the effects of the accident.

No. 10 accident.

At Brandon Colliery, belonging to Messrs. Strakers and Love, on the 27th February 1865 Thomas Brady, a coal hewer, was crushed by a shaft cage descending upon him when he was improperly attempting to go across the bottom of the shaft while the cages were in motion in the shaft.

No. 14 accident.

At Newfield Colliery, belonging to the Hunwick Coal Company, on the 18th of March 1865 George Swaddle was crushed by the shaft cage against a bunton, or beam of timber, near the bottom of the shaft of the Binchester pit, owing to his attempting, improperly, to get into the cage after the signal had been given for it to be drawn up the shaft.

No. 16 accident.

At Wingate Grange Colliery, on the 23rd of March, a coal hewer was crushed by the cage against some of the timber framing in the shaft while ascending from his work. He appears to have been in a passion and threatening some one, and to have neglected to take the ordinary care that it is usual and necessary to take when about to ascend a shaft.

No. 31 accident.

At Cassop Colliery, on the 29th of April, John Johnson, the master wasteman of the colliery, was crushed by the cage in the Vale Pit shaft, while he was descending. He was in the cage with some other persons, and wished to get out at the Five Quarter Seam, situated at some distance above the bottom of the shaft; owing to the arrangements of the machinery the engineman had failed to stop the cage at the proper level, and was moving it to the proper level at the moment when deceased was trying to get out, and he was crushed. I suggested an alteration in the arrangements of the engine and machinery to avoid the difficulty of stopping the cage at the Five Quarter Seam of coal.

No. 41 accident.

At Evenwood Colliery, on the 3rd of June 1865, George Richardson, a stone workman, was killed by a shaft cage descending upon him while he was in the act of crossing the bottom of the shaft. It was stated that he was trespassing at the time, but I have reason to suppose that there had been some laxity of discipline, and that such trespassing was of frequent occurrence; and recommended certain precautions, calculated to render the temptation to cross the bottom of the shaft while the cages are in motion less urgent.

No. 43 accident.

At Willington Colliery, belonging to Messrs. Straker and Love, on the 13th of September 1864 Martin Riley received such injuries through the breaking of a winding rope that, after lingering until the 3rd of June 1865, he died in the Durham Infirmary.

Martin Riley, with three other workmen named William Gardner, William Hall, and Martin Roach, respectively, were, about 3 a.m. on the morning of the 13th September 1864, being lowered down the shaft in a cage, and when the cage had descended to within a distance estimated at from 12 to 15 fathoms from the bottom, the winding rope broke, and the cage, with its four occupants, fell to the bottom of the shaft.

The winding rope was a six-strand flat, hempen rope, 6 inches × 1 inch in sectional dimensions, and had been supplied by Messrs. Haggie Brothers of Gateshead, and had, at the time of the accident, been in use less than 19 weeks.

It appears that on the 6th of September, about a week before the accident, some appearances of failure of the stitching at a particular part of the length of this comparatively new rope presented themselves; and in consequence of this, the failed part, about 3 yards in length, was cut out, and the severed portions were joined by a hinge or clasp of the ordinary construction which has been in use in the mines of the district for a period of at least 30 years; unless there was some defect in the details of the hinge.

It was just at the edge of one of the sockets of this hinge or clasp that the rope broke, about a week after the hinge was put on.

The cage only carried a single tub of coal when fully loaded; the weight of the empty cage was 9¼ cwt., and that of the full tub, with the coals it contained, was 12 cwt.; so that the entire load was only 21¼ cwt. or rather more than one ton (exclusive of the weight of the winding rope) under ordinary circumstances.

The diameter of the pulley over which the rope worked was 7 feet, and that of the drum or plane of the engine, upon which it was wound, was only 6 feet at the lift; and the smallness of these diameters would naturally have a great tendency to cause the edges of the sockets of the hinge upon the rope to collapse and bite into rope each time that the hinge passed over them; and only a proper form of hinge, and proper thickness in the iron of its sockets, could have prevented the sockets from gradually cutting into and injuring the rope at their edges under such circumstsnces.

The rope was used for winding coals, up to about 6 p.m., on the day before it broke; and it is stated that the rope and hinge were examined by the brakesman and the banksman after this time, and that in their judgment the rope appeared to be perfectly safe and sound when they examined it.

An examination of the hinge—and of the part of the rope within it, as well as of the part of the rope where the breakage or severance had occurred, close to the edge of one of the sockets of the hinge—after the accident, convinced me that the cause of the rope having broken had been the edge of one of the sockets, which had manifestly cut or ground itself into the rope, and so had caused it to give way, ultimately, under a considerably less load than it was daily charged with, previously.

The hinge, after the accident, presented the appearance of having been too much pressed in upon the rope at the edge of the socket or clasp at the place where the rope had broken, either in the process of rivetting, in its passage over the pulley, or in being folded upon the plane or drum of the engine; but which of these causes had either entirely or chiefly produced the compression of the edge of the socket, and the consequent injury that led to the severance of the rope, I could not determine.

Hinges having all the *general* features of the one under notice, have been used upon pit winding ropes for the past 30 years, to my knowledge, and I have seldom or never heard of a fatal accident arising from their use, before the accident I am remarking upon; but it may be stated that the hinges and the parts of the rope adjoining to them are, in general, more closely watched and attended to than are other parts of the rope; and the hinges are from time to time removed, and the parts of the rope to which they have been applied are cut out, and the hinges then connected to the adjoining parts of the rope, as a safeguard.

I am of opinion that in this case there had been a want of due care in the examination of the hinge, and of the parts of the rope adjoining it, or I think the injury to the rope at the edge of the socket of the hinge might have been detected before the rope broke.

I have had the hinge opened, since the inquest, and I find that there is not the slightest appearance of the rivets through the rope and sockets, at the hinge, having contributed to the breakage of the rope; as, within the socket, at the outer edge of which the rope broke, I find the rope to be perfect and unbroken.

I prefer a rope without hinges, for safety; but as this custom of hinging, rather than discarding a hempen rope while yet nearly new and perfect, excepting at one place, has prevailed, to my own knowledge for 30 years, and I believe for a very much longer period, without, so far as I know, having led to accidents, where due care and attention has been given to the hinges, and to the adjoining portions of the rope; and as there is no express enactment against their employment, I think they will continue to be more or less resorted to.

Where proper care is used I do not object to trust my own life upon a hinged rope; if, however, the examinations of hinged ropes are not sufficiently frequent and minute, the severance of the rope may result, and I have reason to fear that the examination of the rope at and near the hinge, in this case, had not been so minute and so carefully conducted as, under the circumstances, it ought to have been, or I think the abrading of the rope, by the edge of the hinge, would have been detected before the rope broke.

The weight of the rope was about 20 lbs. per fathom, and its breaking strain, if perfect and of good material, about 20 tons.

The weight upon the broken part of the rope when it broke was, inclusive of the rope itself, probably about 19 cwt., or less than one ton, so that it was very lightly loaded, had the rope been in an uninjured state.

At the Victoria Colliery, belonging to Messrs. Ord and Maddison, situated near Bishop Auckland, Joseph Forster, aged 14, assistant banker-out at the top of the shaft, accidentally No. 10 accident.

pushed a tub into the shaft, in the absence of a cage to receive it, and fell down the shaft, and was killed. There were no guards or lifting gates upon the shaft, or this accident could not have happened.

One of the owners of the colliery promised that lifting gates should be adopted, after the accident, and they have more recently been put on.

No. 54 accident.

At South Durham Colliery, near Bishop Auckland, on the 28th July John Bennett, a joiner, fell from a pair of shear legs on which he was engaged, and was precipitated down a counter balance staple over which the legs were placed, and was killed.

No. 59 accident.

At Cold Knott Colliery, near Crook, belonging to Messrs. Wooler, on the 30th August, Aaron Knox, a shift workman, was crushed between the cage in which he was attempting to ascend the shaft, and a fixed cross timber, and was killed.

Deceased himself was partly to blame for getting into the cage before he received a signal from the surface to warrant him to do so.

I also consider that the banksman, hooker-on, and engine-man, were all slightly blameworthy in this accident.

A better code of signals and greater caution for the future were recommended, and I expect have been adopted.

Precautions suggested by the foregoing shaft accidents.

Nos. 1, 15, and 54 accidents, and perhaps No. 31 also, were due to a want of cautiousness on the parts of the respective victims themselves, and serve to indicate the necessity of every person using extreme care when in or about shafts.

Nos. 14 and 59 accidents show the great danger of attempting to enter a cage at the bottom of a shaft after the signal to draw it away has been given.

Nos. 10 and 41 accidents show the danger of attempting to cross the bottom of a shaft while the cages are in motion in it.

No. 49 accident could not have occurred if there had been self-acting guards at the top of the shaft, and is one more illustration of the great benefit attending the use of such guards.

These guards are now very generally employed in this district, and I could wish to see them universally introduced where cages are used, or where their application is practicable.

Miscellaneous underground accidents.

An analysis of this class of accidents gives the following results:—

	No. of Deaths.
Crushed by coal tubs in the workings and horse roads of the mines	7
Crushed by coal tubs in the engine and self-acting planes in the mines	9
By the explosion of a boiler at an underground hauling engine	4
Explosion of gunpowder	2
By machinery (oiling it while in motion)	1
Kicked by a horse	1
Striking head against a projecting nail	1
Total	25

It is satisfactory to observe that there have been fewer lives lost from crushes by coal tubs in the workings and horse roads of the mines of the district during the past year than during any one of several previous years, embraced by the Table.

Dangers attending inbye driving.

The employment of very small ponies in the workings of the mines, to bring the tubs of coals from the hewers to the horse, engine, or other stations, is attended, of necessity, with much liability to accidents, on the part of the boys employed to drive them, as I have remarked in previous reports.

No. 50 accident.

In one of the accidents upon a horse road at Trimdon Grange Colliery, an attempt was made to inculpate the officials of the colliery, at the coroner's inquest, on the part of the friends of the deceased, who employed an attorney to watch the proceedings; but the attempt was abandoned after the proceedings at the inquest.

No. 76 accident.

In another case (at Ryhope Colliery) where a door-keeper was crushed by a full tub, drawn by a pony, in the absence of its driver, the father of the deceased attended the inquest for a similar purpose, but the investigation ended with a like result.

No. 71 accident.

In a third case, where a pony driver was crushed by the pony or tub at a doorway (in Sherburn House pit) dissatisfaction was expressed on the part of the relations of the deceased; but an investigation of the circumstances of the case by a coroner's jury, and, more particularly by myself, did not lead to the conclusion that culpable negligence attached to any person in reference to the accident.

Of the nine deaths which resulted from crushes by tubs in the engine and self-acting planes in the mines of the district, during the past year, two of them have occurred to persons upwards of 70 years of age, the failure of whose faculties may have prevented them from being able to take sufficient care of themselves in such a critical position as an underground engine plane, while the sets of tubs are in motion; by an ordinary amount of care they might have avoided being injured.

Two of these deaths arose from the improper, but very prevalent, practice of riding upon full tubs in places where it is forbidden.

Another arose from attempting to place picks upon a set of tubs in motion.

The remainder occurred under varied circumstances, generally including a want of due care on the part of the unfortunate sufferers themselves.

Explosion of an underground steam boiler

No. 33 a
dent.

At Haswell Colliery, belonging to the Haswell Coal Company, on Tuesday the 1st of May 1865, one of a series of five boilers, connected with an underground hauling engine, exploded, and caused the deaths of four persons—the engineman, the boiler-minder, a fireman, and a hooker-on.

The five boilers connected with the engine were situated in the Hutton seam of coal, at a distance of about 100 yards from the bottom of the shaft. The engine was non-condensing, or high pressure.

For distinction, the boilers were called Nos. 1, 2, 3, 4, and 5, respectively, and it was No. 2 boiler that exploded, being the boiler nearest to the hand-gear of the engine.

The boiler, which was cylindrical in form, 30 feet in length, and 6 feet in diameter, and fired externately, was fitted with two floats, as duplicate water gauges; and also with two safety valves, one 3½ and the other 3 inches in diameter.

On No. 1 boiler there were two safety valves, each 3 inches in diameter; and the rest of the boilers each had one safety valve of 4 inches, and a second one of 3½ inches, in diameter. The water with which the boilers were fed was obtained from the sand lying under the magnesian limestone (which overlies the coal measures of the district) and it was heated before the boilers were fed with it; the water causes a little fur on the boilers, but not any unusual amount.

On the day of the explosion Nos. 1, 2, 3, and 5 boilers were worked, but No. 4 boiler was not in use.

The load upon the safety valves was 35 lbs. per square inch.

A steam gauge, to show the pressure of the steam in the boilers, was placed within view of the engine man while working the engine or at the handles.

The exploded boiler had been laid off, a fortnight before the explosion, to be cleaned and examined; each of the boilers were so laid off and examined once a month, three of them at the end of one fortnight, and the other two at the end of the alternate fortnight, excepting occasionally, when all the boilers were laid off at one and the same time. The colliery engineer had examined the fittings of the boiler a fortnight before the explosion, and he stated at the inquest that he then found them in good order.

The master blacksmith, whose journal was produced at the inquest, had examined the exploded (No. 2) boiler, when laid off for the purpose, a little more than a fortnight before it exploded, and had afterwards reported it as being in working order.

The engine had been at rest for about half-an-hour before the explosion occurred, owing to an injury having occurred to the hauling rope.

The fireman stated that there were no leaks in the boiler at the time of the occurrence.

No more than one of the boilers was fed at one time.

Although the boilers were generally fed with warm water, it was quite possible, with the head of water from the shaft, to feed them with cold water in any case of emergency, and it was suggested that this had perhaps been done while the engine was standing, owing to the injury to the hauling rope, immediately before the explosion, and that this had possibly caused the explosion; an opinion in which I do not concur; my reasons for not agreeing with this opinion (knowing that the delivery end of the cold water feed pipe was 15 inches from the bottom of the boiler), and my own views as to the cause of the explosion are expressed in the following statement, which is almost a literal copy of a report presented by me to the coroner and jury at the inquest:—

" I have carefully examined the exploded boiler since the occurrence, and particularly
" the quality of the iron along the line of fracture, and I find the iron of the plates numbered

1 and 2 [on a model of the boiler] to be of very brittle quality at this time, although their quality may have been good when they were first used in the construction of the boiler. The iron of these plates is nearly of its primitive thickness of 3-8ths of an inch, the usual thickness of iron employed in the construction of such boilers. I am of opinion that the iron of these plates has become deteriorated by exposure for a long period to the action of hot air and gases from the boiler fire, and therefrom become so weakened as to have been rent by the working pressure, or at most by the little pressure beyond this, arising from the resistance offered by the safety-valves to the escape of the steam while the engine was standing. The plates Nos. 1 and 2 appear to be some of the original plates of which the boiler was constructed, and have probably been in use whenever the boiler has been used since that time. My reason for thinking that the explosion commenced at one or other of these plates is based upon the bad or deteriorated quality of the iron in these plates, combined with the fact that it was situated in one of the lines where such a boiler naturally offers least resistance to rupture. Such a boiler naturally presents only one half the resistance to rupture in a longitudinal line that it offers in any of its cross sections, apart from the quality of the iron and the position of seams; but in this case the quality was brittle and short, and a longitudinal line of rivets would further weaken it at the same place so as to cause it to offer only about 56 per cent. of the resistance of the solid plates in the same direction; that is to say, the longitudinal resistance of a solid plate is only 50 per cent. of the resistance of the same plate in the cross section, but at a longitudinal seam it offers only 56 per cent. of this latter resistance, or only 28 per cent. of the resistance of the solid plate in the cross section. The rent along the edges of the plates Nos. 1 and 2 extends longitudinally in a straight line for a distance of about $9\frac{1}{2}$ feet, or nearly one-third of the length of the boiler. This and other boiler explosions lead me to be of opinion that it is desirable to remove all boiler plates that have been exposed to the hot air and gases from the fire, at the end of not more than 20 years from their being so exposed, even when the plates retain their original thickness and show no outward signs of failing. I have observed no signs of the boiler having been unduly low of water or overheated. As the boiler had two safety-valves upon itself, and as the steam generated in it had access to six other safety-valves by way of the steam pipes connecting the four working boilers, I do not think that the pressure has greatly exceeded the working pressure of 35 lbs. per square inch. It probably did not exceed 40 per square inch. As to the effect of the introduction of the cold water feed, supposing it to have been introduced (although there is no satisfactory proof of this), I conceive that one of the results would be the gradual and temporary lowering of the temperature of the water in the boiler, accompanied by a less energetic generation of steam in that boiler; but the steam from the other boilers would, I think, keep the steam pressure in the boiler being so fed, nearly equal to that existing in the other boilers, and I do not think it very probable that any contraction of the plates immediately below the feed pipe would be so great in amount as to be likely to cause a rupture of the boiler. The lineal dilatation of wrought iron in being heated from 32° to 212°, or through 180°, is only ·001258 of the length so heated; and steam at 40 + 15 = 55 lbs. per square inch only has a temperature of about 290°, so that if we suppose the cold feed water to have been at 50° the difference is 240°, or one third more than the difference 212° — 32° = 180°, so that the contraction would only be ·001677 of the length at the temperature of 50°, if even we suppose it reduced to the full extent; but it is difficult to suppose that it could be cooled by any admissable quantity of cold feed to more than one half of this extent, taking the average of the entire length of the boiler which was 30 feet. On this supposition we may assume that the contraction over the total length of the boiler might be about 0·3 or three-tenths of an inch, a quantity so trivial in proportion to the length of the boiler, that I do not think it likely to have produced a rupture of the boiler. The plate immediately under the place where the cold water feed pipe entered the boiler is not, I consider, so much deteriorated in quality as are some of the other plates, Nos. 1 and 2 in particular.”

I may add, that owing to the steam generated in the four working boilers having had access to eight safety valves (two upon each boiler) through the steam pipe connecting them, and, since these valves were of ample dimensions, it is very improbable indeed that any considerable and continued over-pressure of steam, beyond the load on these valves, could have prevailed.

As there were no signs of lowness of water, or of overheating of the plates therefrom, and as the boilers could be fed at any time by means of the pressure from the cold water pipes in the shaft had it been necessary, owing to the standing of the engine while the repairs of the broken rope were being made. I do not think that any want of water in the boiler, or overheating in consequence, at the time of the accident, had produced the rupture of the boiler.

The steam was probably blowing off, and the very slight additional pressure due to this, probably produced the fracture at the weakest part of the boiler, where the iron of the plates was much deteriorated in tenacity from long exposure to the hot air and gases from the boiler fires.

The startling fact that no fewer than four boilers have exploded at as many different collieries, situated within a few miles of each other, in this inspection district, within the short period of 21 months, through which 11 persons have lost their lives, and several others have received personal injuries, appears to me to render it highly important that neither outlay nor care and vigilance should be spared in attempting to prevent the recurrence of this class of accidents.

Suggested prohibition of using boiler plate beyond a limited num ber of year

My personal examinations of exploded boilers, and investigations as to the causes of these catastrophes, have led me to be strongly of opinion that a considerable proportion of them might be averted by a legislative enactment limiting the period during which any of the plates of a boiler should be used.

Such an enactment ought perhaps, if deemed to be expedient, to apply to all steam boilers in the country, and not be confined to those used at mines or collieries alone.

I have thought that a term of 20 years is long enough to rely upon boiler plates in use, particularly in high-pressure boilers, and more especially as regards the plates exposed to the action of the fire, or that of the hot air and gases from it; but these details would, as a matter of course, require mature consideration, should such an enactment come to be seriously contemplated.

An Act of Parliament of the class just alluded to, would, in my opinion, prevent many boiler explosions which no class of fittings or appliances, and no degree of care in the ordinary examinations of boilers, are calculated to prevent.

Such an Act might perhaps beneficially require that all steam boilers should be tested by hydraulic pressure, considerably beyond their working pressures, at moderate intervals, to be specified in the Act.

Accidents on the surface at and about the tops of the shafts.

The number of deaths from accidents at and about the tops of the shafts of the mines of the district have been rather more numerous during the past year than they were on an average of the four preceding years.

Out of the 21 deaths of this class, no less than eight of them have been caused by crushes from coal trucks and waggons; and in some of these cases the sufferers were not following their proper employment at the time they were injured.

A classification of these accidents may be given as follows:—

Crushed by coal trucks and waggons - - - -	8
Crushed by surface machinery - - - - -	3
Crushed by small coal apparatus tubs - - - -	2
Scalded by hot water from boilers - - - -	2
Other accidents of a miscellaneous character, each causing a single death - - - - - -	6
Total - - -	21

From this classification it may be seen that crushes by coal trucks and waggons (at the screens and upon the railway branches near the pits) cause the largest proportion of this class of deaths. Amongst the eight persons who lost their lives from this particular cause, there were three screeners, two drivers of branch horses, one waggon man, one apparatus boy, and one labourer.

The apparatus boy was away from, and not following his proper employment at the time when the accident occurred to him.

Of the two persons killed by surface machinery one was off his employment when killed.

No. 9 accident.

Amongst the miscellaneous accidents above ground, one was the case of a screener who was in a small coal apparatus hole, at Low Bitchburn Colliery, cleaning out the small coals, in company with another person, the working of the apparatus having been suspended to admit of this being done.

The other man came out of the hole after he considered it was cleaned, and expecting his companion had also come out, gave orders for the apparatus to commence working again.

On setting it to work the chain broke, and the tub ran down the inclined plane and caused the death of the man who had been left behind and had not left the hole at the time.

On examination I found the apparatus chain to be very much worn by long use, and had human life, under ordinary circumstances, been depending upon it, I should have considered it totally unfit for the purpose, in consequence.

Even as a safeguard against the destruction of property alone, I told the manager, Mr. John Sharp Oakey, that I thought it ought to have been discarded from use.

The manager, who was, I believe, the only person who assumed the duties of colliery engineer, was not, I thought, qualified for such an office, and I requested the owner of the colliery to provide a proper person to fulfil the duties of that office; and in reply I received a letter dated Feb. 24th stating that a proper person had been appointed as engineer over the colliery.

No. 27 accident.

About 10 weeks after the occurrence of this accident the same manager (Mr. John Sharp Oakey) was superintending the removal of a boiler from its seat at the same colliery, when one of the chains used for the purpose, broke, and he received such a blow from it as resulted in his death.

Mr. Oakey was, I believe, a nephew of the owner of the colliery, Mr. John Sharp; and I have reason to suspect that the old worn chain which caused his death was a part of the chain of which I had complained when in use at the small coal apparatus, in the before mentioned (No 9.) accident; this, however, I did not positively ascertain to be the case.

I have long considered that a parsimonious management has prevailed at this colliery, but I have reason to hope that these accidents, and other circumstances, combined with my strong representations to the owner, Mr. John Sharp, have to some extent at least convinced that gentleman that it is not quite safe to follow this course in future.

Reported serious personal injuries arising from non-fatal Accidents.

As I stated in a former report, the list of accidents causing serious personal injury, obtainable from the cases of which notices are given, are very imperfect, from the fact that there is no statement of fixed amount of personal injury which is to be considered as being *serious* under the terms of the Inspection Act; owing to which there is a wide diversity of practice in giving notices of such injuries.

The 14 cases of serious personal injury which have been reported in this district during the past year are as follows:

Coal hewers, injured by falls of stone - - - - -	7
Do. do of coal - - - - -	1
Sinker or shaft man, injured by falling off a cradle, part way down a shaft - - - - - - - -	1
Deputy, injured by a fall of stone - - - - - -	1
Branch horse driver, crushed by surface waggons - - -	1
Crushed by tubs underground - - - - - -	1
Explosions of blasting powder - - - -	2
	14

Complaints by workmen.

Complaint as to Byers Green Colliery.

In April 1865 I received a complaint from some workmen as to the state of the ventilation of Byers Green Colliery.

On inspecting it I found that the ventilation was defective, owing to the partial and temporary stoppage of one of the principal return airways, leading towards the upcast shaft at Newfield Colliery, being flooded by water coming from that colliery.

I recommended the temporary suspension of the working of some of the districts of the mine, and a temporary change in the ventilating arrangements, to enable the other districts to be more efficiently ventilated until the airway could be reopened by the removal of the water, or otherwise; and my suggestions were readily acted upon by the agents of the colliery.

Complaint as to Evenwood Colliery.

I received a complaint from one of the workmen at Evenwood Colliery, in the early part of May, to the effect that the banksmen neglected to attend at the top of the shaft, at mornings, to see work-people safely into the cage, and that there was no onsetter at such times to see them safely out of it, at the bottom of the shaft; that the workmen required to cross the bottom of the shaft to get their picks out of the tubs, and sundry minor matters so far as these complaints were well founded remedies were applied, at my instance, without delay; the whole being completed in less than three weeks after my inspection.

Complaint to Hunwic Colliery.

I received a written complaint as to Hunwick Colliery, dated 30th May 1865, as to the ventilation, the unpleasant heat imparted to the intake air by steam pipes, the dangerous state of a travelling way, and an insufficiency of timber for the support of the roof.

The ventilation I found not to be so bad as to infringe the 1st General Rule; I had no direct power to do more than suggest the removal of the steam pipes from the intake into the return airways; and as to the other two matters complained of, I did not consider the travelling way to be more than ordinarily dangerous; nor did I observe any lack of timber for the support of the roof.

The complaint, in this case, was made professedly on the part of a single individual, under a fictitious name.

Complaint as to Thor ley Collier

In June I received a written complaint, purporting to be on the part of the miners of Thornley Colliery (signed however by one man only, and who I have reason to think had no general authority to make the complaint on behalf of his fellow workmen) to the effect that they considered a certain travelling road in an engine plane was not fit to be travelled in.

On inspecting the engine plane I found it in a very good state, in general; the only fault I could find being that a little rubbish had been cast into some of the places of refuge by the side of the way; a promise was given that the rubbish should be removed and the practice of depositing stones and rubbish in these stalls strictly prohibited.

Complain as to Heu Hall Colliery.

In July last I received a complaint from a workman of the Heugh Hall Colliery, as to the ventilation of a portion of the mine.

On inspecting it I found that the part alleged to have been in the worst condition was not then being worked, but was abandoned and inaccessible.

The ventilation of the other part I considered might be looked upon as being a bare compliance with the requirements of the 1st General Rule of the Inspection Act.

I made some suggestions for its improvement, and for the removal of a nuisance from the heat imparted to the air by steam pipes in the downcast shaft.

These recommendations were, I believe, only partially adopted.

The colliery has since been advertised for sale, with other of the West Hartlepool Harbour and Railway Company's Collieries.

Complain as to Wes Stanley Colliery, subsequer explosion fire-damp

About the 28th of July I also received a written complaint, on the part of the workmen of West Stanley Colliery, as to the ventilation there, the defect being owing, it was stated, to the want of a ventilating furnace, and to the neglect of putting in proper air stoppings; and as to one or two other matters of minor importance.

On the 1st of July, less than a month previous to receiving this complaint, I had inspected the workings in the particular pit (at West Stanley Colliery) which is situated in this inspection district, the other shaft being in Mr. Dunn's district; although the former shaft is the upcast and the latter the downcast for the air ventilating the workings of both.

After making this inspection, and before receiving any complaint on the part of the workmen, I had addressed a letter, of which the following is a copy, to Mr. David Burn, the owner of the colliery.

"David Burn, Esq., Chilton Moor Fence Houses,
"SIR, July 4, 1865.

"ON Saturday last I inspected your Stanley Colliery, and found the ventilation so defective as at the time to be barely a compliance with the First General Rule of the Inspection Act, and I am of opinion that atmospheric changes, or very ordinary occurrences within the mine, may, from time to time, cause it to be such as to fail to comply with these requirements.

"Hence I recommend that you forthwith apply a furnace, fan, or other ventilating power to create the necessary ventilation of the mine. If you have a spare shaft in connexion with the mine, a fan would probably be the best thing for the purpose.

"I also recommend that proper ladders for the passage of persons be fixed, and kept constantly in order, in the staple up which the air ascends to the Low Main coal seam.

"I give you notice that you are infringing the law in not having a proper means of conveying distinct and definite signals from the surface to the bottom of the shaft, and request that you will at once provide such means.

"I recommend that you put safety gates on the top of the shaft.

"As the gas generated in the mine consists partly of fire-damp, I recommend that pillar working in the Low Main coal seam be conducted only with safety lamps, and that both the whole and pillar workings be examined with safety lamps on all occasions before the workmen are permitted to enter them with naked lights. I shall be glad to meet and confer with you on any of these points if you wish it.

Yours faithfully,
JOHN J. ATKINSON,
Govt. Inspector of Mines."

And I had also received a reply to this letter to the following effect:

"Sir, West Stanley Colliery, July 6, 1865.

"I am sorry that my viewer was absent when you made your inspection here on Saturday last; he had an attack of illness, which made it necessary for him to repair to the sea side to recruit; on his return in a few days your letter of the 4th, only received this morning, will be laid before him, and he will proceed to comply with your requisitions with the least delay possible, and afterwards he will be glad to see you to confer on these matters, &c.

I am, Sir,
Very obediently yours,
D. Burn."

J. J. Atkinson, Esq.,
Chilton Moor Fence Houses.

On the 1st of August, after receiving the complaint, I again visited the colliery and had an interview with Mr. Joseph Atkinson, the viewer of the colliery, when, amongst other things, he agreed to put in a proper ventilating furnace forthwith. He also promised that all the working places should be examined with safety lamps only, before the men begun to work each morning, and that when pillar working should be commenced in the Low Main coal seam, safety lamps only should be used in such working. As regards the safety lamps, the promise of course only referred to the Low Main coal seam, which seam alone was being worked in this inspection district, while the Hutton coal seam alone was being worked at the pit situated in Mr. Dunn's district. On the 22nd of November, a few months after my visit, an explosion of fire-damp occurred in a pillar working district, in the Hutton coal seam, in Mr. Dunn's district, at Stanley Colliery, by which two lives were lost, and three other persons burnt. The pillar workings were being carried on with naked lights, and the furnace had not been lighted nor completed, at the time of the occurrence.

I attended the inquest, along with Mr. Dunn, and aided in bringing the correspondence, and the general facts mentioned, as evidence, before the jury.

Complaint as to Kelloe Colliery.

In November I received a letter professedly written at the request of the miners of Kelloe Colliery, complaining of the condition of the ventilation there. On the 20th and 21st of November I inspected the workings of the colliery, and then found some of the working places not to be ventilated so as, in my opinion, to comply with the 1st General Rule of the Act, and I gave notice to the manager of the colliery to this effect, and made suggestions for remedying the defects. The necessary operations for removing the causes of complaint had been commenced when he replied to me on the 24th of November, and have, I expect, been since completed so as fully to comply with the Act. More careful regulations as to persons about to descend and ascend the shaft had also been carried out, these having also been complained of. The facts were reported to you at the time.

Complaint as to Low Bitchburn Colliery.

In December I received a letter complaining of the ventilation of Low Bitchburn Colliery, but on investigating the case I concluded the complaint to have been only a vexatious one, made by a workman under notice to leave the colliery. The owner, Mr. Sharp, however, promised that he would forthwith take steps to get a proper ventilating furnace established in the mine, so as to improve the ventilation, a promise which he had made to me upon a previous visit, but operations had still not been commenced to establish the furnace.

The ventilation of this colliery has not been quite satisfactory, in particular states of the weather, for some time past; yet I have not observed what I consider to have been a positive breach of the requirements of the 1st General Rule of the Act; I expect that the furnaces, when put into operation, will render it much more satisfactory.

Mr. Sharp, the owner, told me that he had contracted for the work necessary to be performed in the shaft, &c., previous to commencing to use a furnace, while I was on my visit to the colliery on this occasion.

Complaint as to fencing of old shafts on Cockfield Fell.

In the month of December I also received a complaint as to the imperfect state of the fencing around the tops of old and abandoned shafts upon Cockfield Fell; and on visiting the Fell I found some of the fences in a decayed and dilapidated state, and gave notices requiring them to be put into a proper condition.

This, it was promised, should forthwith be complied with.

Defective ventilation at Cassop Colliery.

On making an ordinary visit of inspection to Cassop Colliery, on the 4th of July, I found the workings of the newly opened Harvey seam of coal to be imperfectly ventilated, the ventilation being effected by means of about 60 fathoms of wooden boxes, of less than two superficial feet in their united sectional areas, and that there were dangerous accumulations of fire-damp in different portions of the workings. I gave notices of infringements of the Inspection Act, and in consequence of the notice the explorations were suspended until after an ordinary 3-inch plank brattice had been put into the shaft.

Notice t
owners
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Trimdon
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On the 29th of July I gave notice to the owners and agents of Trimdon Grange Colliery that I considered it dangerous to fire shots for blasting in the Long-Wall workings, in the Low Main coal seam, at that colliery; objection was taken to this opinion, and five persons were named by the manager, from amongst which arbitrators were to be chosen.

Mr. E. F. Boyd, of Moor House, near Durham, was selected as arbitrator, and received his formal appointment on the 7th of September; he has, since that time, acquainted himself with the facts of the case, but has not yet made his award in the matter.

Cases in which an extension of time for providing second shafts or outlets, at mines having each only a single shaft or outlet, was awarded.

Out of the six cases in which an extension of the time otherwise prescribed by the Act, 25 and 26 Victoria, Chapter 79, four have already been provided with such second shafts or outlets, viz., Adelaide Colliery, Coxhoe Colliery, Belmont Colliery, and the Alexandrina pits of Rainton Colliery.

In the other two cases the second shafts are in course of being sunk, the extensions of time in these instances not having yet expired; one of them is the case of Castle Eden Colliery, where a term of two and a half years from the 19th of November 1864 was allowed by the arbitrator; and the other case is that of Ryhope Colliery, where a term of four years from the 31st December 1864 was allowed for the completion of the second shaft.

Employment of boys in mines, and means adopted for the education of boys so employed.

I have nothing to add to the remarks contained in my annual report for last year in relation to this subject.

I had the honor of submitting a special report to your notice in reference to this subject in January 1864.

Number of collieries in the district.

There are 161 collieries in this inspection district, being only one more than were reported last year; there have been, however, several additional shafts sunk at the collieries during the past year.

There are more coal miners employed, and more coals raised, in this than in any other inspection district, as the collieries in it are much larger than the average of collieries in the Kingdom.

I have, &c.
(Signed) John J. Atkinson,
Inspector of Mines.

To the Right Hon. Sir George Grey, Bart., M.P.,
Her Majesty's Principal Secretary of State
for the Home Department,
&c. &c. &c.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS of LIFE arising therefrom, in SOUTH DURHAM INSPECTION DISTRICT, during the Year ending 31st day of December 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865.														
Jan. 9	1	Hunwick	Auckland	Lancaster & Co.	Richard Curry	Driver	14	Crushed by cage descending	–	–	1	–	–	1
„ 13	2	Framwellgate	Durham	Marchioness of Londonderry.	Wm. Mavin	Drum minder	19	Drawn upon drum by rope	–	–	–	–	1	1
„ 16	3	Etherley (George Pit)	Auckland	Col. Stobart and Partners	Wm. Young	Furnaceman	74	Crushed by set of tubs on plane	–	–	–	1	–	1
„ 16	4	Shotton	Easington	H. Taylor & Co.	Robert Adamson	Stone teamer	21	Crushed by a tub that fell out of cage	–	–	–	–	1	1
„ 18	5	Middle Bitchburn.	Auckland	Constantine Coal Co.	Wm. Scott	Horse driver	12	Crushed by horse and tub on surface	–	–	–	–	1	1
„ 24	6	Wingate Grange	Easington	Executors of late J. Gully	Thompson Brown	Door-keeper	12	Crushed by cage when playing at pit top.	–	–	–	–	1	1
Feb. 1	7	South Pelaw	Chester-le-Street	Perkins & Co.	Wm. Manning	Hewer	19	Crushed by tubs on underground engine plane.	–	–	–	1	–	1
„ 7	8	Roddymoor	Crook	Joseph Pease and Partners	Martin Mac Nichol	Screener	22	Crushed between two trucks	–	–	–	–	1	1
„ 13	9	Low Bitchburn	Ditto	John Sharp	William Hebdon	Ditto	63	Jammed by apparatus tub, chain broke.	–	–	–	–	1	1
„ 27	10	Brandon	Durham	Strakers & Love	Thomas Brady	Hewer	27	Crushed under the cage at the bottom of the shaft	–	–	1	–	–	1
Mar. 1	11	Eppleton	Hetton	Hetton Coal Co.	Thomas Dodds	Wasteman	70	Crushed by tubs in engine plane	–	–	–	1	–	1
„ 10	12	Houghton	Houghton-le-Spring	Earl of Durham	Henry Duke	Deputy	46	Fall of stone when drawing a jud	–	1	–	–	–	1
„ 17	13	Thornley (Low Main)	Easington	Thornley Coal Company	Patrick Mullen	Hewer	25	Fall of stone	–	2	–	–	–	2
„ 17	„	Ditto	Ditto	Ditto	Fred. Beardall	Ditto	28							
„ 18	14	Newfield	Auckland	Lancaster & Co.	George Swaddle	Engineman	20	Crushed by cage near shaft bottom	–	–	1	–	–	1
„ 23	15	Newton Cap	Ditto	Newton Cap Coal Co.	Benj. Roberts	Horse driver	14	Crushed by tubs in self-acting incline	–	–	–	1	–	1
„ 23	16	Wingate Grange	Easington	Executors of late J. Gully	Edward Stewart	Hewer	37	Crushed by cage in ascending	–	–	1	–	–	1
„ 25	17	Black Boy (Gurney pit)	Auckland	Black Boy Coal Co.	Edward Newton	Ditto	21	Fall of coal	–	1	–	–	–	1
„ 30	18	Whitworth	Ferry Hill	R. S. Johnson & Co.	Joseph Lee	Ditto	39	Fall of stone, in broken	–	1	–	–	–	1

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death and Remarks.	Number of Lives lost. Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865. April 1	19	Sherburn House	Durham - -	Earl of Durham - -	William Walker -	Hewer -	39	Fall of stone - - - -	—	1	—	—	—	1
„ 3	20	Adelaide -	Auckland - -	Joseph Pease and Partners	William Lives -	Ditto -	39	Ditto in broken - - -	—	1	—	—	—	1
„ 4	21	Twizell - -	Chester-le-Street	John Joicy & Co. - -	William Taylor -	Waggon-man	60	Crushed by a truck - - -	—	—	—	—	1	1
„ 6	22	Byers Green -	Ferry Hill -	Bolckow and Vaughan -	John Carver -	Fireman -	35	Scalded while repairing feed pump -	—	—	—	—	1	1
„ 14	23	Willington (A pit)	Ferry Hill -	Strakers and Love - -	John Buckingham -	Hewer -	33	Fall of stone in broken - - -	—	1	—	—	—	1
„ 17	24	Okenshaw -	Ferry Hill -	Ditto - - -	John Brierley -	Driver -	13	Struck by crank pump when oiling -	—	—	—	1	—	1
„ 18	25	Ryhope - -	Sunderland -	Ryhope Coal Co. -	John Murton -	Ditto -	14	Crushed by an empty tub - -	—	—	—	1	—	1
„ 20	26	Pelton - -	Chester-le-street	Lord Dunsany & partners	James Conelly -	Hewer -	35	Fall of stone, working shift work -	—	1	—	—	—	1
„ 23	27	Low Bitchburn	Crook - -	John Sharp - - -	John Sharp Okey -	Manager -	32	Struck by broken chain - -	—	—	—	—	1	1
„ 25	28	Eppleton (Caroline.)	Hetton - -	Hetton Coal Co. - -	George Portess -	Hewer -	33	Crushed by tubs in engine plane -	—	—	—	1	—	1
„ 27	29	Haswell - -	Fence Houses -	Haswell Coal Co. -	John Brown -	Horse driver	12	Kick from a horse - - -	—	—	—	1	—	1
„ 28	30	Iveston -	Consett - -	Consett Iron Co. - -	Mattw. Atkinson -	Hewer -	60	Fall of stone - - - -	—	1	—	—	—	1
„ 29	31	Cassop (Vale pit.)	Ferry Hill -	Hilton Philipson & Co. -	John Johnson -	Master Wasteman	45	Crushed by a cage at 5/4, descending	—	—	1	—	—	1
„ 30	32	Houghall -	Durham - -	Love and Spark - -	Thomas Cresswell -	Branch driver	13	Run over by wagons on the branches	—	—	—	—	1	1
May 1	33	Haswell - -	Fence Houses -	Haswell Coal Co. - -	William Davison -	Engineman	28	Deaths caused by the explosion of an underground boiler.	—	—	—	4	—	4
					George Tate -	Boiler minder	38							
					Thos. Armstrong -	Fireman -	20							
					T. Whittingham -	Hooker-on -	15							
„ 3	34	Trimdon Grange	Ferry Hill -	M. Foster - - -	Thomas Redding -	Tub coupler	12	Crushed by tubs - - - -	—	—	—	1	—	1
„ 5	35	Murton - -	Fence Houses -	South Hetton Coal Co. -	William Cook -	Hewer -		Crushed by tubs in engine plane -	—	—	—	1	—	1
„ 19	36	Auckland Park	Auckland - -	Black Boy Coal Co. -	John Tate - -	Stoneman -	28	Shot exploded while drawing pricker	—	—	—	1	—	1
„ 19	37	Pelton - -	Chester-le-Street	Lord Dunsany & partners	Joseph Dixon -	Hewer -	43	Crushed by tubs in engine plane -	—	—	—	1	—	1
„ 20	38	Ryhope - -	Sunderland -	Ryhope Coal Co. - -	William Ellison -	Driver -	21	Run over by a set of tubs - -	—	—	—	1	—	1
„ 24	39	Old Durham -	Durham - -	Earl Vane - - -	George Grey -	Deputy -	44	Fall of stone - - - -	—	1	—	—	—	1
„ 24	40	Etherley (George Pit).	Auckland - -	Col. Stobart and Partners	George Thompson	Hewer -	24	Fall of stone - - - -	—	1	—	—	—	1
June 3	41	Evenwood -	Cockfield - -	Robert Armstrong & Co.	George Richardson	Stoneman -	32	Crushed by cage at bottom of shaft	—	—	1	—	—	1
„ 3	42	Craghead -	Chester-le-Street	William Hedley - -	John Dodds - -	Hewer -	59	Fall of stone in broken - -	—	1	—	—	—	1

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865. June 3	43	Willington	Ferry Hill	Strakers and Love	Martin Riley	Hewer	23	By winding rope breaking, descending shaft.	–	–	1	–	–	1
„ 5	44	Trimdon Grange	Easington	M. Cook	Edward Temple	Helper up	12	Run over by a full tub	–	–	–	1	–	1
„ 9	45	Trimdon	Ditto	Thomas Wood and Co	George Cook	Rolley-way man	59	Explosion of fire-damp	1	–	–	–	–	1
„ 9	46	Hedley Hope	Tow Law	Joseph Pease and Partners	John Forster	Screener	12	Crushed by waggons	–	–	–	–	1	1
„ 23	47	Ryhope	Sunderland	Ryhope Coal Co.	Isaac Hustler	Branch driver	18	Run over by waggons	–	–	–	–	1	1
„ 30	48	Brandon	Ferry Hill	Strakers and Love	Thomas Sides	Stoneman	24	Powder explosion while stemming	–	–	–	1	–	1
July 3	49	Victoria	Witton-le-Wear	Ord and Maddison	Joseph Forster	Banker out	14	Fell down shaft from surface	–	–	1	–	–	1
„ 5	50	Trimdon Grange	Ferry Hill	M. Forster	John Gallaghan	Driver	13	Fall of stone	–	1	–	–	–	1
„ 14	51	Gurney Pit	Auckland	Black Boy Coal Co.	Thomas Bolam	Screener	69	Crushed by waggons near screens	–	–	–	–	1	1
„ 20	52	Tursdale	Ferry Hill	Messrs. Cochrane	Thomas Gibson	Fireman	14	Fell amongst machinery	–	–	–	–	1	1
„ 24	53	Job's Hill	Crook	Joseph Pease and Co.	Wm. Patterson	Shifter	53	Struck his head against a nail	–	–	–	1	–	1
„ 28	54	South Durham	Auckland	Smithson & Co.	John Bennett	Joiner	22	Fell down counterbalance staple	–	–	1	–	–	1
Aug. 8	55	Black Boy	Auckland	Black Boy Coal Co.	Edwd. Kennedy	Cartman	33	Fell off cart, crushed by wheel	–	–	–	–	1	1
„ 10	56	Stanley	Crook	Joseph Pease and Partners	Andrew McGarrell	Hewer	38	Fall of stone	–	1	–	–	–	1
„ 18	57	Newton Cap	Auckland	Newton Cap Coal Co.	Saml. Mills	Deputy	45	Ditto drawing a board	–	1	–	–	–	1
„ 23	58	Thornley	Ferry Hill	Thornley Coal Co.	George Wallace Liddell Wallace Matthew Hewitson	Shaftmen Shaftmen Rapper man	41 31 48	By an explosion of fire-damp in the downcast shaft.	3	–	–	–	–	3
„ 30	59	Cold Knott	Crook	Messrs. Wooler	Aaron Knox	Shifter	66	Crushed by cage in shaft	–	–	1	–	–	1
Sept. 5	60	Trimdon Grange	Ferry Hill	M. Forster	Thomas Welsh	Pony leader	12	Crushed between tub and plank	–	–	–	1	–	1
„ 16	61	Bowburn (Engine pit)	Coxhoe	West Hartlepool Co.	John Hand	Hewer	31	Struck by crab arm	–	–	–	–	1	1
„ 18	62	Hetton (Minor pit)	Fence Houses	Hetton Coal Co.	John Smith	Ditto	42	Fall of stone, in a narrow place	–	1	–	–	–	1
„ 19	63	Ryhope	Sunderland	Ryhope Coal Co.	Emmanl. Heaton	Wailer	16	Fell off erections near the pit	–	–	–	–	1	1
„ 21	64	South Durham	Auckland	Smithson and Co.	Robert Ruecroft	Screener	19	Crushed by apparatus tub	–	–	–	–	1	1
Oct. 2	65	Lady Durham	Durham	Earl of Durham	John Forster	Apparatus boy	11	Crushed by trucks; from his work	–	–	–	–	1	1

List of Fatal Colliery Accidents—*continued.*

Date	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865. Oct. 5	66	Coxhoe	Ferry Hill	West Hartlepool Co.	Wm. Martin	Station boy	20	Crushed by a set of tubs in engine plane.	—	—	—	1	—	1
„ 6	67	Burnhope	Lanchester	Sowerby and Fletcher	James Elsdon	Wailer	13	Scalded at end of sludge pipe	—	—	—	—	1	1
„ 7	68	Page Bank	Willington	Bell Brothers	James Young	Driver	13	Fall of stone	—	1	—	—	—	1
„ 9	69	Okenshaw	Ditto	Strakers and Love	Richard Harrison	Hewer	34	Ditto in broken	—	1	—	—	—	1
„ 22	70	Shotton	Easington	Haswell Coal Co.	John Burrell	Shiftman	58	Ditto	—	1	—	—	—	1
„ 31	71	Sherburn House	Durham	Earl of Durham	Thomas Craig	Horse driver	13	Crushed between tub and door frame	—	—	—	1	—	1
Nov. 3	72	Eppleton (Caroline)	Fence Houses	Hetton Coal Co.	George Bell	Hewer	42	Crushed by tubs in engine plane	—	—	—	1	—	1
„ 9	73	Seaham	Seaham	Earl Vane	Robert Stephenson	Ditto	21	Fall of stone	—	1	—	—	—	1
„ 20	74	Haswell	Fence Houses	Haswell Coal Co.	John Simpson	Labourer	60	Crushed by waggons near the pit	—	—	—	—	1	1
Dec. 20	75	Trimdon	Ferry Hill	Thomas Wood and Co.	James McDonald	Hewer	44	Fall of stone (main coal band)	—	1	—	—	—	1
„ 21	76	Ryhope	Sunderland	Ryhope Coal Co.	Fredk. Thompson	Doorkeeper	11	Crushed by pony and tub	—	—	—	1	—	1
								Total	4	22	10	25	21	82

Mr. Dickinson's Report.

REPORT on the INSPECTION of MINES in the NORTH and EAST LANCASHIRE or MANCHESTER DISTRICT for the Year ended 31st December 1865.—By JOSEPH DICKINSON, Esq., F.G.S.

SIR, Manchester, February 28, 1866.

orking of
Act.

THE following report which I have the honour to transmit to you for the year 1865 is similar to those for some years past. The district has continued free from any great accident, and generally the provisions of the law have been fairly observed. The number of fatal accidents to persons employed in and about the collieries have been 61, and the number of lives lost 66. The numbers for the respective years since reliable reports have been obtained up to the present time being

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its.

Year.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	10 Years Average.	1862.	1863.	1864.	1865.
Separate Accidents.	60	60	73	78	73	52	60	55	55	67	63·3	56	60	60	61
Deaths -	113	82	87	89	84	99	138	68	58	82	90·0	59	68	64	66

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ous years.

As compared with the averages for the ten years ending 1861 there is in the year 1865 a diminution of 2·3 in accidents, and 24·0 in deaths. To these, however, a correction is required for the increase in the number of persons employed, which makes the virtual diminution much greater. According to the numbers taken from the census tables there were 18,249 persons in the year 1851, and 23,525 in 1861. Treating this simply as an equal yearly increase, without taking each year as a fixed per centage higher than its predecessor, gives the average of 20,887 persons for the 10 years; whilst now the number of persons is 23,525. In like proportion, therefore, to these numbers the 61 accidents and 66 deaths amongst 23,525 persons, would be equivalent to only 54·16 accidents and 58·60 deaths amongst the smaller number of 20,887 persons; showing that the virtual diminution in 1865 has been at the rate of 9·14, or 14·44 per cent. in accidents, and 31·40, or 34·89 per cent. in deaths, as compared with the 10 years' average.

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ised.

With regard to the useful return, which you now require to be made annually, showing the proportion of accidents and deaths to the number of persons employed and tons of coal raised, there is really no reliable means by which the exact number of persons and the tons of coal can be correctly ascertained for each year; and the accuracy of the numbers has to depend upon the information obtained, and the computation made by each Inspector. I have endeavoured so far as my own district is concerned to obtain this information as accurately as possible; and, with that view, I have made application to each colliery owner for the actual average number of persons employed, and the tons of coal raised. The number of persons employed has been supplied to me in every instance except eight; and as the total comes almost identically the same as that taken from the census tables for 1861 that number may therefore remain unaltered. The number of tons of coal raised has been supplied to me in all except ten instances. The actual returns sent in amount to 6,047,685 tons, and the quantity for the other ten owners I have computed at 264,315 tons; making the total quantity 6,312,000 tons. The computed part being only about one twenty-third of the whole is so small that it cannot materially affect the general accuracy; and having myself some personal knowledge of each of the collieries, as well as collateral information to guide me in the computation, the result may be taken as substantially correct.

The return shows that there has been:

	Persons employed.		Tons of Coals raised.
1 separate fatal accident to every	385	and	103,475
1 death to every - -	356	and	95,636

Comparing this return with what was past it is clear that improvement has been effected, as pointed out in the previous per-centages. In the 10 years 1851 to 1861 there was one accident to only 330 persons; and one death to only 232 persons instead of one to the larger numbers as at present. The quantity of coal raised during the ten years has not been so accurately ascertained, but it is apparent that it would show progressive improvement similar to that in proportion to the number of persons employed.

Extension
this district

In order to make the boundary more distinct between this district and West Lancashire the townships of Heskin, Charnock Richard, and Welch Whittle, together with the Arley collieries in the township of Blackrod, have, with your sanction been transferred to this district commencing with the 1st of January 1866. The effect of this change as regards Blackrod is to place the whole of the collieries of that township, except a portion of the Wigan Coal and Iron Company's colliery in this district; but as regards the three other townships the transfer is wholly new. In future years, therefore, in making comparisons of accidents and deaths, those previous to 1866, which took place in and about the collieries of the portions now transferred, should be reckoned as if they had happened in this district.

Penalties imposed.

In the following instances, acting with your sanction, I have caused legal proceedings to be taken as to infringements of the law, and for which penalties have been enforced, namely:

The owner, Snapes Colliery, not causing safety lamps to be examined and locked - - - - - - - - -	£2	0	0
The owner, Bent Grange Colliery, not properly fencing off access to firedamp - - - - - - - -	2	10	0
The managing owner, Brimrod Colliery, the number of 20 persons allowed down a single shaft at one time being exceeded - -	5	0	0
Ditto, not having each safety lamp, that was required to be used, locked - - - - - - - - -	10	0	0
The owner, Bents Colliery, not providing adequate ventilation against blackdamp - - - - - - - - -	10	0	0
The owner, Coppull Hall Colliery, the number of 20 persons allowed down a single shaft at one time being exceeded - - -	5	0	0
Ditto, not providing adequate ventilation against firedamp - -	10	0	0

In addition to the foregoing the following proceedings were taken by the owners with my approval;

The fireman, Brotherod Colliery, not setting the required signals -	0	5	0
The lampman, Towneley Colliery, not locking a safety lamp, which was required to be used - - - - - - -	2	0	0

Of the 15*l.* imposed as to the Coppull Hall Colliery, 10*l.* by your direction has been ordered to be paid to the widow of the fireman who got suffocated in the fire-damp. The other penalties will have been paid by the clerks to the justices to the receiver of Government Fines, to be paid into the Consolidated Fund as the law directs.

Compensation to a widow.

In the year 1864, on proceedings being taken by me as Inspector of Mines, a penalty of 5*l.* was imposed against the manager of the Stand Lane Colliery, Radcliffe, near Manchester, for not providing the required refuge places at the side of an engine plane in the Whitefield pit; and which sum upon my recommendation was, by your direction, given to the widow. Further proceedings have since been taken by the widow against the owners of the colliery for compensation; and, at the Liverpool assizes, in December last, before a special jury, a verdict was given in her favour for 300*l.*

Proportions of carbonic acid gas.

In the proceeding this year as to black or choke-damp I obtained the services of Dr. R. Angus Smith, and the inquiry having been carefully gone into, it may be useful to record the proportions in which carbonic acid gas, the chief constituent of this damp, is considered injurious. It appears that when there is from 2 to 2½ per cent. of carbonic acid gas present, the proportion depending somewhat upon temperature, moisture, &c., candles are extinguished; and that so small a proportion as ¼th per cent. is sufficient to make a workshop be considered close. It is not known exactly how much will suffocate a man; but few people could bear 4 per cent. long, and it is believed that it would be rapidly fatal to some. When candles go out it is a plain warning that a man would not last long; and to be harmless there should not be so much carbonic acid gas present, in the air of any mine, as to dim the burning of a candle.

The Fatal Accidents in 1865 occurred at the following Collieries.

Collieries where the accidents have taken place.

Owners.	Collieries.	Accidents.	Lives Lost.
Barnes, Joseph, Executors of	Dunkenhalgh Park	1	4
Bridgewater Trustees	Delph	1	1
Ditto	Tonges Field	1	1
Ditto	Wardley	1	1
Ditto	Mangnalls	1	1
Brierley, J. and Son	Brandwood Moor	1	1
Brooks and Pickup	Towneley	1	1
Chamber Company	Oak, Chamber, and Chadderton	1	1
Cliviger Company	Cliviger	2	2
Coppull Hall Company	Coppull Hall	2	2
Cross, Thomas	Doffcocker	2	2
Dewhursts, Hoyles, and Smethurst	Anderton Hall	2	2
Diggle, James	Westleigh and Heyfield	2	2
Edge Lane and Dryclough Company	Hartford and Robin Hill	2	2
Fishwick, H. H. and Company	Brotherod	1	1
Fletcher, Ellis, Trustees of the late	Clifton and Kearsley	2	2
Ditto	Denton	1	1
Fletcher, John, and others	Atherton	1	1
Fletcher, Thomas	Breightmet	1	1
Ditto and Sons	Outwood	1	1
Green, Holland and Company	Tyldesley	2	2
Hargreaves, Ashworth, and Co.	Baxenden	1	1
Hargreaves, Executors of John	Smallshaw	1	1
Ditto	Rowley	1	1
Ditto	Broughton	1	1
Johnson and Livesey	Bradford, Manchester	2	2
Knowles, Robert and Co.	Cleggswood	1	1
Knowles, Andrew and Sons	Clifton Hall	1	1
Ditto	Pendlebury	2	2
Ditto	Pendleton	1	1
Knowles and Stott	Stoneclough	2	2
Leeses and Booth	Fairbottom	2	2
Leeses, Jones, and Company	Holebottom	1	1
Leigh and Bradbury	Clayton, Manchester	1	1
Longworth, John and Nathaniel	Brinsop	1	1
Lordsfields Company	Lordsfields	1	1
Mayall, Leach, and Seddon	Lower Moor	1	1
Place, Joseph	Hoddlesden	1	1
Ramsden, William	Shakerley	1	1
Roscoe, James and William	New Watergate	1	1
Scowcroft, Samuel	Rosehill	1	1
Stanley, John, Executors of	Moston	1	1
Stott, James	Unity Brook	1	1
Stott and Pickstone	Stand Lane	2	2
Stott, Richard and Son	Ashworth	1	2
Wild, Haigh and Co.	Hopwood	1	1
Whittle, Thomas and William	Duxbury	1	1
Wright, John	Bank	1	2
		61	66

LIST of the FATAL COLLIERY ACCIDENTS and LOSS OF LIFE arising therefrom in the NORTH and EAST LANCASHIRE or MANCHESTER DISTRICT, under MR. DICKINSON'S Inspection, during the Year 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. Jan. 5	1	Holebottom	Oldham	Leeses, Jones and Co.	H. N. Taylor	Miner	59	Bronchitis, accelerated by his falling whilst removing a stone; no inquest was held.	–	–	–	1	–
„ 7	2	Anderton Hall	Blackrod	Dewhursts, Hoyles, and Smethurst.	Thos. Watmough	Ditto	—	Explosion of fire-damp; died 20th from the burns. It appeared that gas had for the first time become accumulated, and the deceased, although cautioned not to go into it, wrongfully sent his waggoner in for some wedges by which the gas was drawn out and fired.	1	–	–	–	–
„ 14	3	Lords Fields	Ashton-under-Lyne	Lords Fields Company	Samuel Taylor	Hooker-on	—	Killed whilst ascending the furnace shaft, apparently crushed against a horsetree.	–	–	1	–	–
„ 16	4	Hartford	Oldham	Edge Lane and Dry Clough Company.	Joseph Wilson	Miner	45	Roof stone, which he was attempting to remove, falling upon him.	–	1	–	–	–
Feb. 15	5	Clifton and Kearsley	Manchester	Trustees of the late Ellis Fletcher.	Ellis Hobson	Ditto	44	Crushed between the cage and a conducting rod in ascending the Manor pit; died 17th.	–	–	1	–	–
„ 17	6	Cliviger	Burnley	Cliviger Coal Company	Jos. Barraclough	Waggoner	13	Crushed between two tub waggons, on the Chain road in the Union pit, as he was adjusting the chain into the fork of a waggon.	–	–	–	1	–
„ 25	7	Lower Moor	Oldham	Mayall, Leach, and Seddon.	Saml. Stocks	Miner	39	Crushed by a fall of stone; died 2nd of March.	–	1	–	–	–
Mar. 1	8	Delph	Middle Hulton	Bridgewater Trust	John Worthington	Ditto	36	Coal which he was taking down in the Plodder mine falling upon him; died 27th August.	–	1	–	–	–
„ 4	9	Robin Hill	Oldham	Edge, Lane, and Dry-clough Company.	Saml. Mellor	Ditto	22	Earth and top coal falling upon him from the roof; died 28th.	–	1	–	–	–

List of Fatal Colliery Accidents.—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. March 6	10	Pendlebury	Manchester	Andrew Knowles & Sons	Edmund Royle	Miner	—	Earth falling in the Shuttle mine	–	1	–	–	–
„ 13	11	Stoneclough	Stoneclough	Knowles and Stott	James Davenport	Ditto	41	Coal falling in the Trencherborne mine, Little Hey pit.	–	1	–	–	–
„ 18	12	Stand Lane	Radcliffe	Stott and Pickstone	Wm. Boardman	Laborer	—	Stone falling from the roof of No. 3 pit.	–	1	–	–	–
„ 20	13	Fairbottom	Ashton-under-Lyne	Leeses and Both	Wm. Houghton	Waggoner	—	Falling from a mouthing at the Fairbottom mine down to the Foxholes mine in the Dock pit shaft.	–	–	1	–	–
April 2	14	Coppull Hall	Coppull	Coppull Hall Colliery Company	James Green	Banksman	—	Falling down the sinking shaft whilst landing a bucket of water	–	–	1	–	–
„ 6	15	Stand Lane	Radcliffe	Stott and Pickstone	Thos. Barlow	Miner	—	Roof falling as he was waggoning past in the Four-feet mine; died 11th.	–	1	–	–	–
„ 11	16	Dunkenhalgh Park	Church	Trustees of the late Joseph Barnes.	John Cecil John Illingworth Geo. Eastham John Duckworth	Hooker-on Waggoner Ditto Ditto	23 18 17 14	Explosion of fire-damp in the Mountain mine, Dillhall pit. Gas which had been accumulated in rise workings became liberated as the water which kept it there was being pumped out. It apparently fired at an open light which should have been prohibited when the water was being drawn off. The deceased were suffocated by the after damp.	4	–	–	–	–
May 2	17	Cleggswood	Littleborough	Robert Knowles & Co.	Matthew Marcroft	Ditto	13	Crushed by a tub-waggon. The brake pin sprang out as he was bringing the waggon down a slope, he being in front instead of behind.	–	–	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. May 6	18	Pendleton	Manchester	Andrew Knowles & Sons	James Edge	Miner	—	Coal falling in the Albert mine. Insufficient sprags being set whilst mining.	1	–	–	–	–
,, 10	19	Moston	Ditto	Executors of John Stanley	Wm. Sypot	Ditto	47	Hurt by a tub-waggon running against him. He afterwards returned to his work but was not supposed to have recovered from the shock.	–	–	–	1	–
,, 13	20	Clifton Hall	Ditto	Andrew Knowles & Sons	James Tarbrook	Ditto	45	Roof coal falling upon him. He was taking out a chock prop to get the coal down.	–	1	–	–	–
,, 24	21	Heyfield	Westleigh	James Diggle	Thos. Rigby	Ditto	20	Coal falling in the Six-feet mine. The coal would not come down as he expected, and he recommenced holing without resetting sprags.	–	1	–	–	–
,, 27	22	Tonges Field	Farnworth	Bridgewater Trust	Francis Crowther	Ditto	46	Found dead in Wilkin Hall ladder pit. He was ill, and it was supposed he fell from the ladders.	–	–	1	–	–
,, 31	23	Hoddlesden	Over Darwen	Joseph Place	Geo. Duckworth	Ditto	—	Injured by a shot, which had missed fire, going off as he and others were drawing the stemming; died in the Bolton Infirmary 11th June.	–	–	–	1	–
June 15	24	Ashworth	Heywood	Richard Stott and Son	John Lord Thos. Howarth	Ditto Ditto	21 17	Roof falling upon them as they were taking out a pillar of coal in the Mountain mine.	–	2	–	–	–
,, 21	25	Heys, Fairbottom	Ashton-under-Lyne	Leeses and Booth	John Logan	Ditto	—	Coal and roof falling	–	1	–	–	–
,, 29	26	New Watergate	Little Hulton	James and William Roscoe	Thos. Cotton	Boy	13	Coal falling	–	1	–	–	–
,, 30	27	Baxenden	Accrington	Hargreaves, Ashworth, and Co.	Robt. Riley	Miner	29	Roof falling upon him whilst striking out his props in the Victoria pit.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1865.													
July 10	28	Denton	Manchester	Trustees of the late Ellis Fletcher.	George Cook	Miner	37	Roof falling upon him as he was preparing for arching in the Jet Amber mine.	–	1	–	–	–
„ 12	29	Brandwood Moor	New Church	J. Brierley and Son	John Holden	Ditto	34	Roof falling upon him in the Sand Rock mine.	–	1	–	–	–
„ 21	30	Pendlebury	Manchester	Andrew Knowles and Sons	James Rothwell	Ditto	—	Died from injuries received on the 26th November, 1864, from earth falling in the Rams mine.	–	1	–	–	–
„ 24	31	Rose Hill	Bolton	Samuel Scowcroft	Thos. Napkin	Engineman	50	Overwinding one of the cages upon himself in the engine-house. He had only just begun to work this engine.	–	–	–	–	1
„ 29	32	Duxbury	Chorley	Thos. and Wm. Whittle	James Bateson	Day-man	—	Roof falling; died 27th October	–	1	–	–	–
Aug. 14	33	Wardley	Worsley	Bridgewater Trust	Geo. Osbaldeston	Miner	23	Suffocated by fire-damp; the gas accumulated in consequence of his taking down the bratticing which sent air in. He was about to replace it, but, instead of keeping air up with him, he left his safety lamp behind and went right into the gas.	–	–	–	1	–
„ 19	34	Bradford	Manchester	Johnson and Livesey	James Stott	Laborer	40	Falling whilst going down the steps from the pit-hill.	–	–	–	–	1
„ 21	35	Tyldesley	Tyldesley	Green, Holland and Co.	James Darbyshire	Hooker-on	12	Roof falling	–	1	–	–	–
„ „	36	Ditto	Ditto	Ditto	Thos. Makin	Miner	—	Ditto	–	1	–	–	–
„ 24	37	Shakerley	Ditto	William Ramsden	Thos. Brown	Engine-boy	17	Foot caught between the spur wheels of an engine below ground; died 4th January, 1866.	–	–	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1864. Aug. 29	38	Bank	Little Hulton	John Wright	Peter Heathcote Robt. Roscoe	Miner Ditto	21 32	Burned by an explosion of fire-damp in the Cannel mine. There was lax supervision on the part of the masters; and the miners, by opening their locked safety lamps and firing shots, were infringing the rules.	2	–	–	–	–
" "	39	Coppull Hall	Coppull	Coppul Hall Colliery Co.	Richard Marsden	Fireman	48	Suffocated by fire-damp. The colliery had only a single shaft with more than the allowed number of persons down at one time, and the ventilation was inadequate.	–	–	–	1	–
" 31	40	Smallshaw	Burnley	Exors. of J. Hargreaves	John Booth	Boy	12	Caught by spur wheels, which he was oiling.	–	–	–	–	1
Sept. 8	41	Clayton	Manchester	Leigh and Bradbury	Chas. Shawcross	Ditto	17	Fired a can with 4lbs. of powder in it Died in the Manchester infirmary.	–	–	–	1	–
" 9	42	Bradford	Ditto	Johnson and Livesey	Wm. Knifeton	Miner	—	Injured by a fall of stone, died 19th.	–	1	–	–	–
" 18	43	Breightmet	Bolton	Thomas Fletcher	Joseph Green	Ditto	32	Whilst placing a prop on the cage, his foot slipped and he fell down the shaft.	–	–	1	–	–
" 23	44	Clifton & Kearsley	Manchester	Trustees of the late Ellis Fletcher.	John Knight	Ditto	22	Fall of roof whilst taking the coal down in Botany Bay pit.	–	1	–	–	–
Oct. 6	45	Hopwood	Ditto	Wild, Haigh & Co.	John Scholes	Dayman	44	Roof falling whilst he was undermining the coal.	–	1	–	–	–
" 7	46	Westleigh and Heyfield.	Leigh	James Diggle	Geo. Mattimore	Carter	44	Squeezed when about to unhook a horse from a railway waggon.	–	–	–	–	1
" 10	47	Oak	Hollinwood	Chamber Colliery Co.	John Moreton	Dayman	41	Hit on the head with the handle of a windlass.	–	–	–	1	–
" 14	48	Rowley	Burnley	Exors. of John Hargreaves	Thomas Crowther	Tenter, for winding materials only.	16	Entangled in the chain at an angle pulley on a plane worked by an endless chain in the mine.	–	–	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Fall of Coals and Roof.	In shafts.	Miscellaneous.	Above ground.
1864. Oct. 20	49	Broughton	Burnley	Exors. of J. Hargreaves	Richard Eddleston	Tenter	10	Squeezed between the endless chain and the pulley, on the surface.	–	–	–	–	1
„ 30	50	Atherton	Atherton	John Fletcher and others	William Thorpe	Miner	36	Coal falling upon him in the Gib Field mine.	–	1	–	–	–
„ „	51	Unity Brook	Stoneclough	James Stott	Thomas Tatlock	Ditto	—	His shot not having brought the coal down, he went under and coal fell upon him, in the Doe mine.	–	1	–	–	–
Nov. 2	52	Doffcocker	Bolton	Thomas Cross	James Harmer	Hooker-on	17	Roof falling near the shaft bottom	–	1	–	–	–
„ „	53	Brotherod	Rochdale	H. H. Fishwick & Co.	Ashton Brierley	Miner	40	Explosion of fire-damp. The fireman, knowing there was gas, allowed him to go in with a candle to bat it out. Proceedings were taken by the owners, and the fireman was fined 5*s.* and costs.	1	–	–	–	–
„ 8	54	Cliviger	Burnley	Cliviger Coal Co.	Robert Nutter	Waggoner	15	Overtaken on a slope by a waggon which got loose from another waggoner.	–	–	–	1	–
„ 20	55	Anderton Hall	Blackrod	Dewhurst, Hoyles, and Smethurst.	George Darbishire	Ditto	15	Roof falling in the yard mine, No. 2 pit.	–	1	–	–	–
„ 22	56	Stoneclough	Stoneclough	Knowles & Stott	James Morris	Enginewright	—	Falling down the singing clough shaft. He was about taking an air pipe down when it is supposed a strong wind blew the tub over and knocked him down.	–	–	1	–	–
Dec. 1	57	Towneley	Burnley	Brooks & Pickup	John Spencer	Miner	36	Explosion of fire-damp. He incautiously opened his safety lamp whilst cutting through into an unventilated place. The fireman. for omitting to lock the deceased's lamp, was proceeded against by the owners and fined 2*l.*	1	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Dec. 12	58	Brinsop - -	Westhoughton - -	J. and N. Longworth -	Andrew Holden -	Waggoner -	10	Roof falling upon him. James Fletcher, the underlooker, having at the request of the boy's father, a miner, allowed him to work without a certificate, was on the 11th Jauuary, 1866, proceeded against, and fined 5*l.* and costs.	–	1	–	–	–
„ 14	59	Doffcocker -	Bolton - - -	Thomas Cross - -	Wm. Crompton -	Banksman -	60	Crushed by the pump-rods on his falling off the platform at the pit head.	–	–	–	–	1
„ 18	60	Outwood -	Manchester - -	Thos. Fletcher & Sons -	Thos. Turner -	Miner -	39	Explosion of fire-damp in the Doe mine, died 15 Jan. 1866. His place had been clear during the morning, but having gone out for an hour gas accumulated, and he omitted to try with the safety lamp on returning.	1	–	–	–	–
„ 27	61	Mangnalls -	Worsley - - -	Bridgewater Trust - -	Nathl. Allen -	Ditto -	35	Coal and earth falling in his place in the Brassy mine.	–	1	–	–	–
								Total, 61 fatal accidents, and 66 lives lost.	10	31	7	12	6

nflux of Water.

Another of those serious influxes of water to which mines are subject has taken place during the past year, but fortunately it has not been attended with loss of life. This has occurred in the Botany Bay pits of the Clifton and Kearsley Colliery near Manchester. It appears from the particulars which have been laid before me that on the 8th of November as the miners were at work in the seam called the Ram's Mine, the place being previously dry, a large volume of water suddenly burst in from the floor, and there quickly broke down the coal from the face of a fault which was at the side, where the coal was being worked back from the boundary. It made a great crackling and disturbance, and before dams could be put in to shut off that part of the workings, the water had filled the lower workings which were worked by an engine plane, to the bottom of the shafts. The depth to the working where the water broke in is about 120 yards from the surface. There were no old workings near, nor any place, where dead water could come from. The fault is apparently the largest in the coalfield. It has a downthrow of about 1000 yards, which here brings in the Trias, or upper new red sandstone, on the opposite side; and there is a gravel deposit, called Pepper Hill, on the surface above the working: but whether the water has come from the rock, or by the fault vein from the gravel above, is not known. The feeder has now been flowing about 16 weeks, and is continuing at the rate of 600 gallons per minute. At present the pumping and winding power is inadequate to do more than keep the water from rising above the bottom of the shafts; but preparations are being made for unwatering the flooded portions on the deep, and, if possible, dams will be put in to isolate the part where it has entered. In the year 1829, about a mile from this place, in the adjoining township of Pendlebury, but away from the fault, a feeder of about 3000 gallons per minute broke from the gravel into an upper seam, called the Top or Worsley Four-feet mine, which buried up two men, the remains of whose bodies are still there, and has since laid in all the workings in this portion of that mine extending from Pendleton to Worsley. There does not, however, appear to be any data for supposing that the two feeders are in anyway connected. In some of the neighbouring collieries, where the new red sandstone is at the opposite side, the precaution is taken of leaving a pillar or barrier of coal against the fault; but in the Botany Bay pits two upper ranks of coal, at shallower depths, had been worked off many years ago for a distance of 280 yards along the fault without water appearing, and that precedent was being followed in the deeper rank where the water entered.

I have, &c.
Joseph Dickinson,
Inspector of Mines.

The Right Hon. Sir George Grey, Bart., G.C.B., /
Principal Secretary of State.

Mr. Higson's Report.

REPORT of the WORKING of the MINES INSPECTION ACT (23 & 24 Vict. c. 151.) in the WEST LANCASHIRE AND NORTH WALES DISTRICT, during the Year ended 31st December 1865.—By PETER HIGSON, Esq.

SIR, Manchester, February 28, 1866.

THE following pages which I have now the honour to transmit report my proceedings, as Inspector of the mines of coal and ironstone of the coal measures in the district comprising West Lancashire and North Wales for the year 1865. They show the number of fatal accidents which have occurred, the loss of lives they have caused, the number of collieries, the number of persons employed in and about the mines, the quantity of coal got and raised, and the working of the Act for the regulation and inspection of mines in the time and within the district herein previously mentioned.

In the year 1864 there happened in the district to which these observations refer 92 fatal accidents which caused the death of 111 persons. In the year 1865, 99 fatal accidents have occurred, by which 117 lives have been lost. This shows an increase of seven in the number of fatal accidents and of six in the number of lives lost in 1865, which has been a very unfortunate year. There has, however, not only been a much larger out-turn of coal at the collieries which were in operation in 1864, but many new mines have been since opened at which alone, while bringing them towards a state of active occupation, eight of the fatal accidents causing the death of 12 persons of the number herein previously stated have occurred. If, therefore, no new works for the extension of trade had been progressing, the number of fatal accidents and the loss of life would have been less in the year 1865, although the out-turn of coal in that year exceeded that of 1864 by 500,000 tons. It is also clear that an increased get of coal occasions a corresponding increase of fatal accidents and of loss of life, and that, according to the ascertained ratio of the district, there is one fatal accident for every 81,000 tons and one life lost for every 69,000 tons of coal got and raised, the excess of coal got in 1865 over and above that of 1864 would, reasoning from analogy, cause six fatal accidents and the loss of seven lives. At the mines, therefore, which were being worked in 1864, and on an out-turn of coal of 7,500,000 tons (the quantity produced in that year) the accidents and loss of life in 1865 show a diminution of six in the number of fatal accidents and of 12 in the number of lives lost.

Of the 99 fatal casualties which happened in the year 1865 and caused the death of 117 persons, there were eight causing the death of 11 persons from explosions of fire-damp, 37 causing the death of 38 persons from falls of coal and from falls of stone in mines, 19 causing the death of 31 persons in shafts, 20 causing the death of 22 persons from explosions of gunpowder, falling into water, by machinery, and from various other causes below ground, and 15 resulting in the death of 15 persons on and about the works above ground, all of which will be found herein-after more particularly described. They are of every imaginable class and exhaust almost the whole catalogue of casualties. They have occurred from sudden falls of coal and stone which prevail in the district in consequence of the strata having been broken by faults, &c., &c., and by the workpeople neglecting to fix a sufficient number of props and sprags for their own protection; from defective ventilation, from collapsing of shafts, from unprotected machinery, from falling into shafts from the surface through their own carelessness, from falling out of cages during ascent and descent, and from being injured by railway trucks above ground.

In many instances the deceased carried their lives in their own hands and they lost them by their own negligence.

A very small portion only of the produce of the mines of the district is consumed upon the works and premises or in the neighbourhood thereof, the bulk has to be conveyed by railway or canal to distant markets. In screening, cleaning, loading it into trucks, and forming the trucks into trains, a great many persons are employed, chiefly females of all ages above 15 years. It appears that this kind of labour is not free from risk for although it is performed above ground and by the light of day principally (they sometimes work all night) it is the source of many accidents and of great loss of life, 15 accidents, causing the death of 15 persons, having happened during the year above ground of which nine, including three females, were caused by railway trucks alone, and six from falls in various places, and other misadventures. In proportion to the number of persons employed, loss of life has been greater during the year at the works above ground than in the shafts and mines below.

In consequence of the colliers working short time "which they call their stint" there has for some time been a great demand for underground labourers throughout the district; this has enabled all sorts of people to obtain employment. They apply to the underlooker and are in many instances passed without scrutiny. It is not unusual to hear it proved at a coroner's inquest that the deceased had been nearly blind, or of infirm body or mind, or wanting experience of the work on which he had been employed. At a great many inquiries as to the cause of death which I have attended during the year it was made manifest to me that the deceased had in one way or another and to a greater or less extent helped to cause his own death; in most cases from neglecting to set props and spraggs, in some for want of care on their own part while going down and up the pit, and in others through inactivity or ignorance of the mode of doing their work, or by disobeying orders.

An experienced and cautious manager employs for difficult and dangerous work those only who are considered capable of doing it with comparative safety to themselves and to others. There is, however, not only a limit to the greatest care, but a wide field lies beyond in which subordinates only daily act.

When the colliery has been completed and a proper system for working a mine fully established, the skill of the engineer becomes, as it were, dispensed with, and then the business of the viewer or manager comes into operation. In the working of a large mine hundreds of men and boys may be employed throughout a large area and in perhaps nearly half as many separate places as there are persons to work, in all of which a current of air has to be provided to keep them clear of accumulated gases. They are or ought to be inspected daily, before the men go to work, by firemen, who are persons selected from the body of the workpeople on account of their intelligence and regular habits; and each fireman has a district of the mine placed under his care to be so inspected. An underlooker who in rank is the next superior officer of the mine, may have several firemen under him to whom they have to report their proceedings daily, and if anything important should occur the underlooker has to report it to the resident manager or viewer. A frequent inspection by the manager or viewer of so many workings seems impossible. It must therefore be often put off and only be occasionally made, and it is for this tangible reason and from a just and a proper sense of the importance of having underground operations regularly examined by an educated and trained official that at many well regulated collieries a viewer is employed for that purpose. One collier may be attentive and careful and possess a well-regulated mind; he may keep his own place well propped and spragged, encourage the ventilation, retire safely in front of danger, and in proper time warn all about him, and inform the first officer he can find.

His neighbour working in another compartment of the same mine may be an ignorant and reckless man, he may be unmindful of danger and nervous when he sees it. He may in the event of gas issuing suddenly allow it to accumulate and then carelessly ignite it, and cause the death or serious injury to all about him, even to those who could and perhaps would have caused it to be harmlessly removed; he may obstruct or derange the ventilation, or in fact he may do many things that may produce an injurious effect upon others and escape it himself.

To express a belief that such persons are not employed in almost every mine would be to ignore painful experience.

In some places there may be only a few of them, and the number may diminish, but I have no hope that they will ever entirely disappear.

The constant and safe employment of such a large population of operatives, amounting to 27,600 persons, is a source of considerable anxiety to many; of that number there are some unfitted for underground labour of any kind. They are, however, likely to be employed in some way or other so long as their labour can be made profitable, and it seems desirable that they should be placed under such regulations as will in future prevent avoidable accidents. Employment is seldom refused a collier on account of his being wanting either in skill or care. A better understanding and more frequent intercourse between the employers and managers of mines and employés would remedy many defects. It would enable the former to find out in proper time the capabilities of their men and to put them in their right places. But the bonds which formerly held the two together are now severed. In times gone by they were united as members of the same household, but now they are two separate and distinct branches of the community the employers and the employed.

A great number of colliers are now in the Union, which is a sort of club, by which they have acquired considerable power. They have thereby obtained as they suppose higher remuneration for their labour; this has either been brought about by the increased demand for coal or by lessening the annual production of each person, or by both; they employ salaried agents, and they are now, as I am informed, preparing to move for further Parliamentary legislation on mining, to prohibit female labour above ground at the mines and collieries of Great Britain and to enlarge the means of inspection. Nearly everybody would like to see females employed only on indoor work, but nobody seems capable of showing how and by what process the change is to be made. The practice is not confined to the mines, it prevails largely in other branches of industry, and more perhaps in agriculture than in any other.

As children of tender age are of very little use at collieries they are only employed under pressure put upon the manager by parents in poor circumstances. The age and hours of attendance at which they are to begin and continue such employment might perhaps be matter for a salutary enactment.

"Enlarging the means of inspection." If it means the appointment of as many inspectors as may be required to prevent all accidents that can by human means be prevented, so comprehensive a scheme would involve the employment of a numerous staff, and although they were to be armed with ample legal powers and be well supported, the field of their labours would be private property, and the funds necessary for making improvements, which would have to come out of the pocket of the owner, would be supplied with a niggardly hand, thereby crippling their efforts and damaging the result, for the purpose of throwing responsibility upon the inspectors who by constant visits of inspection would become mixed up and identified with everything that was done. I am not prepared to deny that something more is wanted, but I think that requirement should be supplied by the owners of mines; I have given this subject some consideration, and I have often been astonished at their not rendering Government Inspection unnecessary.

If every mine owner were to employ a competent person to see to the safety of their workpeople one inspector might get over a large district with comparative ease, and several small collieries might be well supervised by one competent person; this would prevent the complaints of the men and their agents, and dispense with further Government interference which none of the mine owners like.

Winding Drums.

A new winding drum or the revival of a very old one has been recently brought into very extensive use. When two ropes are upon the same drum it is supposed so to regulate the power required of the engine to wind a load up the pit as to make it equal and uniform throughout.

They are nearly of all sizes, from four up to 30 feet in diameter, and they are made in various shapes and ways. In some instances the rope coils on a smooth surface, in others it drops into a groove of iron or a shallow groove of wood. The small diameters are sometimes outside and rise towards the middle, occasionally they are in the middle of the drum and enlarge towards the two sides; if the former method be adopted the drum should have a deep outside flanch. Some of these drums are economical and safe, others seem too hazardous and require too much attention.

At an angle of 25° they are safe even when the rope laps on a smooth surface when the angle exceeds 30° they are not to be depended upon, and should not be used for lowering and raising persons.

Steam Boilers.

Too much attention cannot be given to the proper construction and the wear and tear of steam boilers. After having purchased a steam boiler of the proper size, shape, and make, it becomes an important part of the managers or overlookers business to see that it is kept in a safe state of repair, and well supplied with good water free, if it can be obtained, from any precipitate.

In addition also to all the outward care that can be bestowed, it is of the greatest importance to have every boiler internally inspected periodically by a competent inspector of steam boilers, and if such persons are not employed upon the works there are now several associations which undertake such examinations.

Water in abandone Colliery St. Heler

Late in the autumn of 1864 the old Gerard's Bridge Colliery near St. Helen's was abandoned when water began to accumulate in the old workings and waste which had been made there, and gradually fill the shafts.

The Gerard's Bridge Mines are continued without interruption and extensively worked at the St. Helen's, the Ravenhead, and the Cropper's Hill Collieries.

A sufficient barrier appears to have been left in the Rushby Park mine at St. Helen's Colliery, alongside of the Gerard's Bridge boundary, to prevent an influx of water coming in that direction, but the pits which are sunk through the old works of the Ravenhead mines are only lined with a 9-inch brick wall. If, therefore, the Ravenhead mines were to be inundated, it would fill the St. Helen's mines also. In the Ravenhead mines the plans show that for some distance a barrier about 20 yards thick has been left intact on that side of the workings next to Gerard's Bridge, but not the whole length, and persons who have worked there declare that the barrier has been cut through.

The owner of Cropper's Hill Colliery admitted that his workings had penetrated the goaf at Gerard's Bridge years previously, and that there was no barrier but such as would be formed by a subsidence of the strata after the coal had been taken away. Unless the barrier had been carefully set out by actual survey the plans could scarcely be depended on, the surveyor would not always see the extent to which each level was driven; in many instances extending over a series of years he would have to take that information from the underlooker who might not be always correct. Under the circumstances, therefore, I had no confidence in the safety of the workpeople employed on the St. Helen's, the Ravenhead, and the Cropper's Hill mines. It was manifestly attended with serious doubts; the information obtained was not fully reliable, and the risk of life was immense. I therefore believed it to be an imperative duty on my part to serve the owner of each colliery respectively with notice under the 17th section of the Act 23rd & 24th Vict., cap. 151, by which the inquiry was referred to arbitration, and subsequently Mr. John George Blackburne of Oldham was appointed sole arbitrator, to inquire into and decide all matters in dispute. The defendants argued that as the source of danger was not within their own premises or control, nor of their creating, but in the property of other people, they were not liable to remove it, and on the other hand it was contended that they were not justified in continuing their works so long as danger existed, no matter where it lay. The notices also were objected to as not being in accordance with the Act for the inspection and regulation of mines. On these questions being raised the arbitrator adjourned the inquiry to give me an opportunity of obtaining the opinion thereon of the law officers of the Crown. That opinion not only fully established the legality of the notices but the liability of the defendant under the said Act; the arbitrator ultimately decided that the barriers were a sufficient protection, and that although there would be no risk of life in continuing the working of the said collieries with the water hanging over them, there had been probable cause for instituting the inquiry.

Copies of the notices served upon them, and the arbitrator's award on each case, together with plan and section of the mines referred to, are hereunto annexed.

Many of the accidents in the following list have happened from remote causes, over which the deceased had no control, such as the mine having been improperly opened or subsequently unsystematically worked.

Many also have occurred for want of ordinary care on the part of the deceased in places and under circumstances where and when further provisions seemed unnecessary for safety. In some other cases protection was at the time wanting, while in a considerable number the deceased had been either insubordinate to the regulation of the mine or inadequately overlooked in the management thereof.

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The education of boys under the age of 12 years appears to be making slow but steady progress, and the means of obtaining it continues to be from time to time increased. The great demand for labour has, however, very much encouraged its advancement through which boys between the age of 10 and 12 years have been permitted, on bringing certificates of their having attended school according to the Act, to work below ground in mines at which some time ago no boys under 12 years of age were employed.

I have, &c.
(Signed) PETER HIGSON.

The Right Hon. Sir George Grey, Bart., K.C.B.,
Secretary of State.

Accidents and Loss of Life from Explosion of Gas and Gunpowder.

Acciden No. 12.

A collier, Joseph Smith, was burnt by an explosion of gas in the Little Delf mine at the Sankey Brook Colliery on the 19th February, and died from the injury he had received. He left the place he had been ordered to work in, and unknown to the manager or underlooker he went into an upbrow which had been suspended and began to work there, although there was a danger signal at the entrance. In a few minutes the explosion took place.

Acciden No. 20.

A tunnel was being formed through a fault at the Bromfield Colliery, near Mold, by the deceased John Stone and several others. On reaching the coal beyond the fault a quantity of gas was liberated freely. The contractor sent for a safety lamp, but before it arrived the gas fired at his naked light. The place was about 20 yards out of the main Inbye airway and ventilated by brattice.

Acciden No. 23.

Deceased and his brother were working in two upbrows in the Potato Delf mine. The fireman had been in each place before they arrived, and left the signal for fire at the entrance thereof. Notwithstanding this caution they went to work, and found gas in one place, which, on being subsequently exploded, caused his death.

Acciden No. 25.

Thomas Price, who was burned by an explosion of fire-damp at the Brymbo Colliery in the Two-yards mine, and died from the burns, was a drawer, and 14 years of age. He was sent by the chartermaster along with two other persons to clean up the face of wicket. The fireman told them there was some gas in the goaf a few yards from the face, and cautioned him not to go near it. It appeared afterwards that a fall of roof must have driven the gas from the place where the fireman had found it that morning, and that deceased also had been into the goaf, where the gas had been ignited at his naked light. The fireman acted very indiscreetly in allowing them to go into that place until the gas had been removed; no one should have been permitted to enter therein with a naked light. In the vicinity of gas safety lamps only should be used, and experienced men be employed to remove it.

Acciden No. 46.

The workings of the Tawd Vale Colliery, near Ormskirk, had been extended by an ascending plane some hundreds of yards from the pit over a fault, and a small area of the mine beyond it was all but exhausted. On the 27th June the two boys Rigby and Chisnal were filling coal on the top of the fault late in the day, nearly every person having then left the mine, when the hooker-on went from the eye of the pit to inquire why they also did not come out. He passed the place where they were working, and walked into the goaf for some distance where the roof had not fallen, and then held up his naked light and ignited the gas. It was contrary to the rules of the pit for the hooker-on to leave his place of work, but it was said he was not an intelligent person; he has lost his own life, and caused the death of two others by his want of ordinary caution.

Acciden No. 56.

William Dyson, aged 22 years, and another man, were employed to get up about 10 inches of the floor of the mine on a waggon road in the Arley mine. They drilled a hole about the proper depth, and filled it so full of powder that it burnt out of the hole without blasting the shale, and burned them both very seriously. There was no necessity for using powder; the floor might have been got up without it.

Acciden No. 86.

At Strangeways Hall Colliery two day labourers were, on the 7th November, enlarging a jigbrow, or self-acting plane, in the Ince yard mine beyond a fault at which the previous workings had terminated. The top of the brow in question made gas, and the deceased were told not to go through a door about half way up. The ventilation was conducted beyond the cut through about 25 yards by brattice to the highest point, but the system was somewhat defective; it had not in fact been completed. They were in want of some wagon rails or tramplates, and went up the brow above the door for them. They had a naked light and a safety lamp. The man with the naked light was seen going first, and the one with a safety lamp was following a few yards behind him.

In making an inspection of the mine immediately after the explosion I found a fall of roof had destroyed a brattice stopping prior to the explosion whereby the ventilation of the top of the jigbrow was shut off, the air passing over the fall had a much shorter run into the return air course. That the fall which destroyed the brattice took place prior to the explosion was manifest from the dust, &c., which lay upon it. The top of the jigbrow was not examined by the fireman that morning in consequence, he said, of no person having to work there that day. If he had examined it this casualty might have been avoided, for it is almost certain that the brattice was down at the time he was going his round. The comparatively small issue of gas could not have filled the workings to the extent it did in the time that subsequently elapsed before the explosion happened, and it was proved that previously the ventilation was adequate.

The fireman of the district under consideration was off duty that day, and the manager was only informed of this as the workpeople were going down the pit. The fireman of another district was therefore sent for to inspect the workings, who, not being well acquainted with them and having to go through quickly as the men were waiting and impatient to go down to their work, he omitted going through the upper workings of the jigbrow, which would not have taken him five minutes. This casualty was the result of negligence on the part of the two firemen.

ccident o. 96. At Brynkmalt Colliery, near Chirk, an explosion of fire-damp, causing the death of one man and serious personal injury to three others, occurred on the 1st of December in the main coal.

The manager had ordered the chartermaster to begin a wicket in the main Inbye air course about eight or ten yards wide. It had been worked a few yards towards the bassett of the mine, and the air for ventilation was borne up to the working face by a stopping of boards, one board only being left out by order of the manager to reduce the quantity of air going through the wicket. On the day before the explosion the men found the current too strong, and enlarged the hole in the stopping by taking down several other boards. Afterwards there was little or no air going into the wicket, and the following morning gas prevailed there and was ignited by one of the men who entered with a naked light. The special rules of the mine render it compulsory to have the workings examined by a competent person every morning before the workpeople are allowed to approach them. In North Wales the chartermasters are occasionally authorized to act as firemen. One of the chartermasters was present on this occasion, and although there was a safety lamp within a few yards of the wicket it was not used, and the men were permitted to go to work before the place had been properly examined by him.

ccident o. 99. The last accident in the year was caused by an explosion of fire-damp in the Wigan 9-feet mine at the Walsh pits of the old Ince Hall Colliery, belonging to Mr. Robert James. Two shafts had been sunk to the second of three mines, but one only of the two had reached the third mine, it being intended to produce ventilation there by means of an old shaft some distance on the rise. Deceased, who was a slow workman and nearly blind, was the only person in the mine. There was, however, a fireman repairing the shaft part way down. The unfortunate man had been to the eye of the pit to relight his candle, and in returning to his work missed his way and walked into an adjoining working where he ignited the gas which exploded and injured him so severely that he died soon afterwards.

Accidents and loss of life from falls in mines.

In 1864 there were 40 fatal accidents in this district from falls in mines which caused the death of 43 persons. In 1865 there were 37 fatal accidents which caused the death of 38 persons. This shows (that although an increased quantity of coal was got and raised in 1865) there were two fewer accidents from the above-mentioned cause and that the loss of life was less by five in the last than in the preceding year, and that with one exception only one life was lost by every accident.

ccident o. 37. Bark Hill Colliery. Two little boys were working in the yard mine of this colliery after the usual hour of leaving off. In consequence of their long absence from the eye of the pit, an inquiry was made, when they were found underneath a quantity of stone which had fallen upon them from the roof of the mine, but life had become extinct. It was proved by several persons that prior to this occurrence the place seemed quite safe and that the roof was well secured by props.

ccident o. 53. William Greener, an experienced viewer and resident manager of the Pemberton Collieries, was accidentally hurt by a fall of roof in the Moss House Colliery at Rainford of which he had the supervision. After lingering a few days he died of the injuries he had received.

ccident o. 91. Samuel Appleton, an able workman and a good collier, was while making a place in the Pemberton 4-feet mine at Ince Hall Colliery to hold dirt killed by a fall of coal which fell upon him from between two slips. He was found lying with a spragg in his hand and the coal upon him. This, like many others in the list, was an accident which he could scarcely have been expected to avoid. There have however been many accidents and great loss of life during the year either from ignorance or disobedience of the workpeople in neglecting to fix a sufficient number of spraggs and props for their own protection and in consequence of some underlookers and firemen not having been firm enough in seeing that the special rules of the mine were properly carried out.

Accidents in pits and shafts.

Acciden No. 1.
The first accident of the year happened in a new pit at Douglas Bank, Wigan, which was being sunk for Mr. John Grant Morriss. The pit which was finished to the depth of about 500 yards was 16 feet in diameter. After completing the lining down to the bottom the operation of sinking was recommenced. Several holes were drilled and shots were fired within, as was subsequently proved, a few inches only of the ring on which a length of the lining of brickwork had been so recently laid. When the five deceased persons descended to remove the earth liberated by the shots the sides of the pit collapsed and they were buried beneath about 20 yards in depth of lining which fell upon them.

In a few hours afterwards they were found quite dead. It was then ascertained that there were two slips ranging about a foot behind the ring on two sides of the pit and leaning in towards the middle where they met together a few feet down and that the shots had brought away the foundation from underneath the ring for more than half its circumference; the continuity of the strata being broken at the slips, it would be easily loosened. These slips were unknown to the men and also to the person in charge of the works. They were hidden until they were exposed by the shots and even then some of the dirt had to be got out before they were visible and on that the deceased men were engaged when the casualty occurred.

Acciden No. 4.
It can scarcely be said that death in this case was the result of an accident. The bell-rope having broken got entangled with the moving cage in the pit; deceased upon being told this walked deliberately out of the cabin, got hold of one of the iron guide rods by which he began to descend; he had not got down more than 30 yards when he called for help; the engine tenter, upon seeing this, made to the mouth of the pit as fast as he could and only arrived there in time to hear him fall on the pit bottom. Deceased was the banksman and in the prime of life.

Acciden No. 6.
The deceased, Samuel Jones, employed at the new pits being then sunk at Frood, accidentally fell into one of them from the surface.

Acciden No. 8.
The deceased, Edward Hughes, who was employed in the mines at Mostyn as a labourer, was, when about to ascend the pit, struck by a piece of iron which another man was taking down the pit. It fell from the top and caused his death.

Acciden No. 11.
As several men were engaged upon a scaffold walling a new shaft at Ince, belonging to Messrs. Pearson and Knowles, Richard Eatock, a sinker, was killed by a tub of mortar being emptied at the top into the pit which broke down the scaffold on which he and the others were standing and he died of the injuries he then received. This accident was caused by the banksman hooking the engine to the bucket when it was some distance from the mouth of the pit, to draw it up instead of doing that himself.

Acciden No. 21.
This accident was occasioned primarily by the breaking of an iron wire guide rod while deceased was ascending the pit. When he stopped ascending he attempted to slide down the other rod and appeared to have fallen off. If he had remained in the cage he might have been saved.

Acciden No. 29.
The deceased, a drawer, 16 years of age, was standing in the eye of the pit at Marsh's delf, when a portion of the casing of the side thereof gave way and fell upon him and caused his death.

Acciden No. 39.
This accident was the result of a shot exploding in a sinking pit before the deceased, who was a sinker, could get out of the way.

Acciden No. 42.
The deceased, who was the hooker-on at the Plaskynaston Colliery, was standing in the eye of the pit while the cage was in motion; in descending it came down upon him and caused his death.

Acciden No. 45.
In this case the deceased was at the bottom of a sinking pit about 200 yards deep when a piece of stone fell upon him from the top. The preparations for carrying on the work with safety were all that could be desired, and the accident could only have happened through a little negligence on the part of the banksman in not running the wagon sufficiently over the pit while he was landing a bucket of shale.

Acciden No. 49.
The hooker-on of the Lindsay pit, Haigh, was going down to his work and although he knew that the cage would be stopped at a mouthing a few yards from the bottom, almost before it was brought to a state of rest there, he stepped out and fell to the bottom, and was taken out of the pit quite dead.

Acciden No. 54.
The deceased, who was a collier in the Almond Brook Colliery, fell out of the cage while ascending the pit. No cause could be assigned for it.

cident . 57. An old pit or shaft at the Platt Lane Colliery was undergoing repairs when the deceased persons, a bricksetter and his labourer in preparing the foundation for a new casing loosened some of the old wall which suddenly fell upon them. In repairing old shafts it is much more safe to begin at the top, particularly when the old consist of bricks only not set in mortar.

ccident . 60. This accident happened at the Northop Hall Colliery, in Flintshire, through some irregularity in giving the signal before ascending the pit, which caused the engineman to go on before deceased had got properly into the cage. He was caught between the cage and a bearer, which resulted in death.

ccident . 61. This was caused by a fall of shale from the side of a pit which deceased had contracted to sink for the owners. He had carried on the work too far without securing the sides with casing or lining, stating from time to time that he could not find a proper foundation for a ring. If the owners or managers of collieries suppose that an agreement with a contractor relieves them of responsibility they are labouring under a great mistake. The responsibility under the Inspection Act cannot be altered or avoided. It behoves them therefore to have the provisions thereof in all cases fully carried out. The strata sunk through may be secured in many ways; it is not, therefore, necessary to go on sinking until a sound stratum to lay a foundation ring upon be found. A ring may in most instances be laid upon plugs or iron spikes drilled into the strata, it may be laid upon a framework of square timber, or it may be suspended from above. A temporary shield of timber may also be used if made in the shape of cylinders; but as all these and many other appliances are now so well known to practical men there can be no excuse for neglecting to case or line a pit or shaft when a proper depth has been sunk, although it may not appear to be dangerous at the time.

ccident o. 69. The most serious accident of the year happened on the 12th of September, at the California Colliery in Aspull near Wigan, belonging to the Kirkless Hall Company. As eight persons were ascending the pit the round wire rope by which they were suspending suddenly got off the drum and fell from the top of the drum on to the main shaft of the engine. It was either broken by the fall or severed by the eccentrics on the shaft. The deceased persons, who were within about 30 yards of the top when this occurred, were precipitated to the bottom, about 270 yards, and were, as may be imagined, killed by the fall.

The drum, which was a compensating one, had no grooves for the rope to coil in; it had to coil and uncoil on a smooth surface. It was fixed upon the main shaft of the engine; the engine had two cylinders, and worked with beautiful regularity and at a great speed. The diameter of the drum increased rapidly from each side towards the middle, so that the ropes had to coil and uncoil up and down an incline rising at an angle of more than 40° to the plane of the shaft. It had been in use for some time, and had given, as I understand, the owners satisfaction. The drum was large in diameter, and the elasticity of the rope which was made of steel wire would, if the steam were suddenly shut off, cause the cage to continue at the velocity it had acquired for a short distance. After the speed of the engine had been reduced this would cause the rope to become slack on the drum, and in consequence of the flanges not being sufficiently high it must have slipped off. It had been observed by the men for some time that the engineman had been running the engine at an unusually great speed, and some of them had been speaking to him about it, but no complaint on that ground had been made to the manager. The inquiry was carefully conducted, and the jury returned a verdict of accidental death.

Excepting only the drum, the machinery and plant of this colliery were all that could be desired, but the drum, as the event has since proved, was unsafe.

ccident o. 73. In this case the deceased was acting as banksman over sinkers, and in guiding a tub full of bricks, which had to be lowered down the pit, he suffered himself to be drawn in at the mouth, and he fell to the bottom, about 140 yards.

ccident o. 74. The hooker-on at the bottom of the pit at the Newtown Colliery was hit by a piece of coal, which fell from an ascending tub, which caused his death.

ccident o. 75. Deceased, who was the hooker-on at the Heskin Colliery, was killed by a part of the signal hammer falling upon him from the top. A signal had been given about half a minute before it fell, deceased being at the time in the eye of the pit cleaning the scaffold. It is supposed the hammer was broken by giving the signal.

ccident o. 77. In this case the deceased and another man were standing in a tub in the pit changing a bucket, when one of the brass steps belonging to the L leg fell down the pit. The banksman called "Look out!" and in making an effort to get upon a horse-tree for security both fell into some water which had accumulated at the bottom, in which the deceased perished. The other was got out alive.

Accide
No. 79

This accident, which happened at a sinking pit in Standish belonging to the Kirkless Hall Company, was caused by the negligence of one of the workmen below ground in allowing an iron drill to go up the pit lying on the top of a water bucket. It was raised some distance before it fell off and upon the deceased, who was below, causing his death.

Accide
No. 80

This happened at the Garden Lodge Colliery, near Ruabon, in the pit at which the yard wall and bench mines were being worked. The winding apparatus consisted of a high-pressure steam engine of adequate power, together with a compensating or conical drum, without grooves, for the ropes to coil into, and two round wire ropes which worked in the same pit, and coiled and uncoiled upon the same drum alternately.

The empty or unloaded cage had descended about 20 yards when the rope got out of the pulley, and broke by falling upon the shaft of the pulley. The cage and about 30 yards of rope being then liberated, dropped down the pit and caught against the descending cage in which deceased and three others were riding. He was knocked out and killed by falling to the bottom of the pit. The drum was small in diameter, and placed too near the pit for the length of rope that had to be coiled upon it every winding. The last coil was too far out of a right line with the pulley, which gave it an opportunity of climbing the flanch or side of the pulley when it began to descend. If a round wire rope has to traverse far upon the drum the drum should not be very near the pit. The distance one from the other should be regulated by the number of coils or revolutions of each winding, and placed accordingly. In all cases the top or last coil on the drum should be in a right line with the pulley, so that in winding on the rope should lean to and pull up the inclined plane of the drum.

Accide
No. 8

The deceased was hooking on at the Yard mine mouthing at a pit in Standith (Bromilow Fields), belonging to the Kirkless Hall Company, when he fell accidentally to the Arley mine below, about 120 yards. Explorations only in search of cannel and coal were being made at both places simultaneously.

Accidents and loss of life from miscellaneous causes.

Accid
No. 3

Two men, a bricksetter and his labourer, were employed removing the side walls of brick arched mouthing, and the underlooker of the pit was giving them instructions, when the arch fell and buried all three beneath the brickwork and shale from the roof. They were soon recovered and taken up the pit quite dead. It was subsequently ascertained that they had removed too much of the side walls which supported the arch. They were all experienced men.

Accidents and loss of life above ground.

Accid
No. 1

This casualty happened at the A pit, Ruabon, belonging to the New British Iron Company, from the bursting of a steam boiler, which caused the death of deceased who was the stoker. The boiler was 27 feet 7 inches long, and the outside shell was 7 feet 6 in diameter. It had a flue down the middle 4 feet in diameter which had been cased or lined with firebricks. Originally the plates had been 7-16 of an inch thick throughout, but in some places they were worn much thinner. It had not been used long, and had frequently borne a pressure of 40 lbs. on the square inch; but on the day of the explosion it could hardly have been so much. The ends were held in by 12 wrought-iron stays, but there were no straps or other appliances to strengthen the flue, which collapsed with the pressure that was upon it. It was one of six boilers in one group, all of the same size and shape, and made of the same quality and thickness of plates. I had previously suspected these boilers and given the manager notice that the flues were not calculated to bear the pressure, that they should be strengthened, and the pressure reduced.

The pressure was at once lessened and preparations for strengthening the flues made. The boiler makers were improving one of the other boilers at the time this gave way, and it would have been next overhauled in like manner.

Internal flues in boilers should never exceed 2 feet 8 in diameter, and even then they should be well strengthened by outside straps of angle or T iron.

Accid
No.

At Blackley Hurst, near St. Helen's, an old and much worn steam boiler, 25 feet long and 5 feet in diameter, with egg-shaped ends, connected with a stationary engine on the colliery branch railway, suddenly burst, and thereby caused the death of the engine tenter, a young man 19 years of age. The boiler was blown a long way from its seat.

It was composed of plates of a different thickness varying from one to three eighths of an inch, which showed signs of frequent repair. Some time before it was said to have been carrying 50 lbs. pressure on the square inch, but I believe that pressure would have caused an explosion much sooner. The engine man was blown 110 yards away from the engine, and the handle of the water valve was found lying near him. The cause of this accident was not enveloped in mystery. It was manifest that the boiler had been unable to withhold the pressure, which could not have been excessive, and that it burst in consequence thereof.

Copy of Notice sent to James Radley, Esq.

Sir, Manchester, May 12, 1865.

As inspector of coal mines and ironstone mines for the district which comprises the Croppers Hill Colliery, near St. Helen's in the county of Lancaster, of which you are the owner, I beg to give you notice in pursuance of the 17th section of the Act for the regulation and inspection of mines, 23rd & 24th Vict. cap. 151, that I have found on inspection, examination, and inquiry, that the said Croppers Hill Colliery is in great danger of being suddenly flooded by water now accumulating in the workings and pits or shafts of the Old Gerard's Bridge Colliery thereunto adjoining, the workings of which colliery have been recently suspended, and that the said Croppers Hill Colliery is, otherwise than as provided against by any express provision of the said Act, or the general or the special rules, thereunder dangerous or defective so as, in my opinion, to threaten or tend to the bodily injury of some person. And I beg to give you further notice that the grounds for my said opinion are as follows: That there is no satisfactory proof of there having been a proper, substantial, and well-defined barrier portion or pillar of coal left in each mine unworked, intact and capable of securely holding back the water now accumulating in the workings, pits, &c. of the said Gerard's Bridge Colliery, as it acquires additional pressure, which is constantly accruing, and that in the event of the said accumulated water suddenly liberating itself, it will most certainly inundate the workings of the mines of the Croppers Hill Colliery, belonging to yourself and partners, and thereby imperil the lives of the persons employed there.

Your attention is particularly called to the 17th section of the said Act, which section is attached to this notice.

I am, &c.

James Radley, Esq. Peter Higson.

Copy of the Award of the Arbitrator.

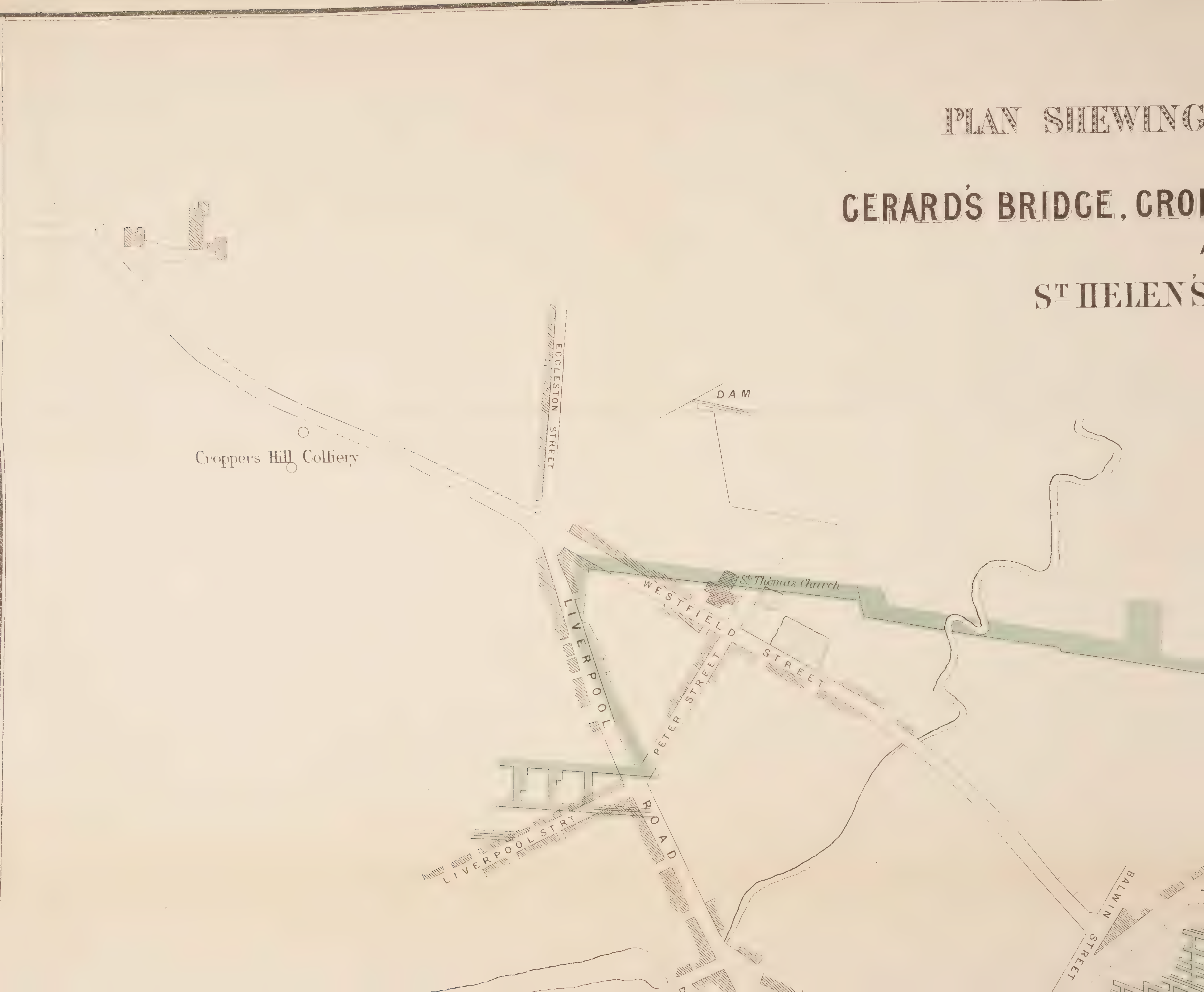
To all whom these presents shall come I, John George Blackburne, of Oldham, in the county of Lancaster, mining engineer, send greeting. Whereas Peter Higson, an inspector for the coal mines and ironstone mines for the district which comprised the Croppers Hill Colliery, near St. Helens in the said county of Lancaster, did, by writing under his hand, dated the 12th day of May 1865, give notice to James Radley, the owner of the said colliery, in pusuance of the 17th section of the Act for the regulation and inspection of mines, 23 & 24 Victoria, cap. 151, that he the said Peter Higson had found, on inspection, examination, and inquiry, that the said Croppers Hill Colliery was in great danger of being suddenly flooded by water then accumulating in the workings and pits or shafts of the Old Gerard's Bridge Colliery thereunto adjoining, the working of which colliery had then been recently suspended, that the said Croppers Hill Colliery was, otherwise than as provided against by any express provision of the said Act or the general or special rules thereunder, dangerous or defective, so as, in the opinion of the said inspector, to threaten or tend to the bodily injury of some person and he gave the said James Radley further notice that the grounds for his said opinion were as follows: That there was no satisfactory proof of there having been a proper, substantial, or well-defined barrier portion or pillar of coal left in each mine unworked, intact and capable of securely holding back the water then accumulating in the workings and pits of the said Gerard's Bridge Colliery, as it acquired additional pressure which was constantly accruing, and that, in the event of the said accumulated water suddenly liberating itself it would most certainly inundate the workings of the mines of the Croppers Hill Colliery, belonging to him the said James Radley, and thereby imperil the lives of the persons employed there. And whereas the said James Ridley did, within 20 days after the receipt by him of the herein-before recited notice, give notice in writing, dated the 1st day of June 1865, to the said Peter Higson and also to the Right Honourable Sir George Grey, Baronet, one of Her Majesty's Principal Secretaries of State, of his objection to remedy the danger mentioned in the said herein-before recited notice and of the grounds thereof, and therein nominated as arbitrators in the matter, Thomas Livesey, Esq., me the said John George Blackburne, Isaiah Booth, Jacob Higson and George Gilroy, being practical mining engineers not interested in or employed in the management of the said colliery. And whereas the said Right Honourable Sir George Grey, Baronet, did, by writing under his hand dated the 23d day of June 1865, appoint me the said John George Blackburne, one of the five persons so nominated, to be the arbitrator to determine the matter in difference. Now therefore I, the said John George Blackburne, having taken upon myself the said reference, and having had before me the parties thereto, and having heard, weighed, and considered their several allegations and statements, and perused and examined the plans submitted to me of the mines and workings of the said Croppers Hill Colliery and of the mines and workings adjoining or near thereto, the correctness of which plans so produced to me being established, as far as practicable to my satisfaction, do find, award, order, and determine that, although there was on the part of the said inspector probable cause to suspect the dangers apprehended and particularly mentioned in his

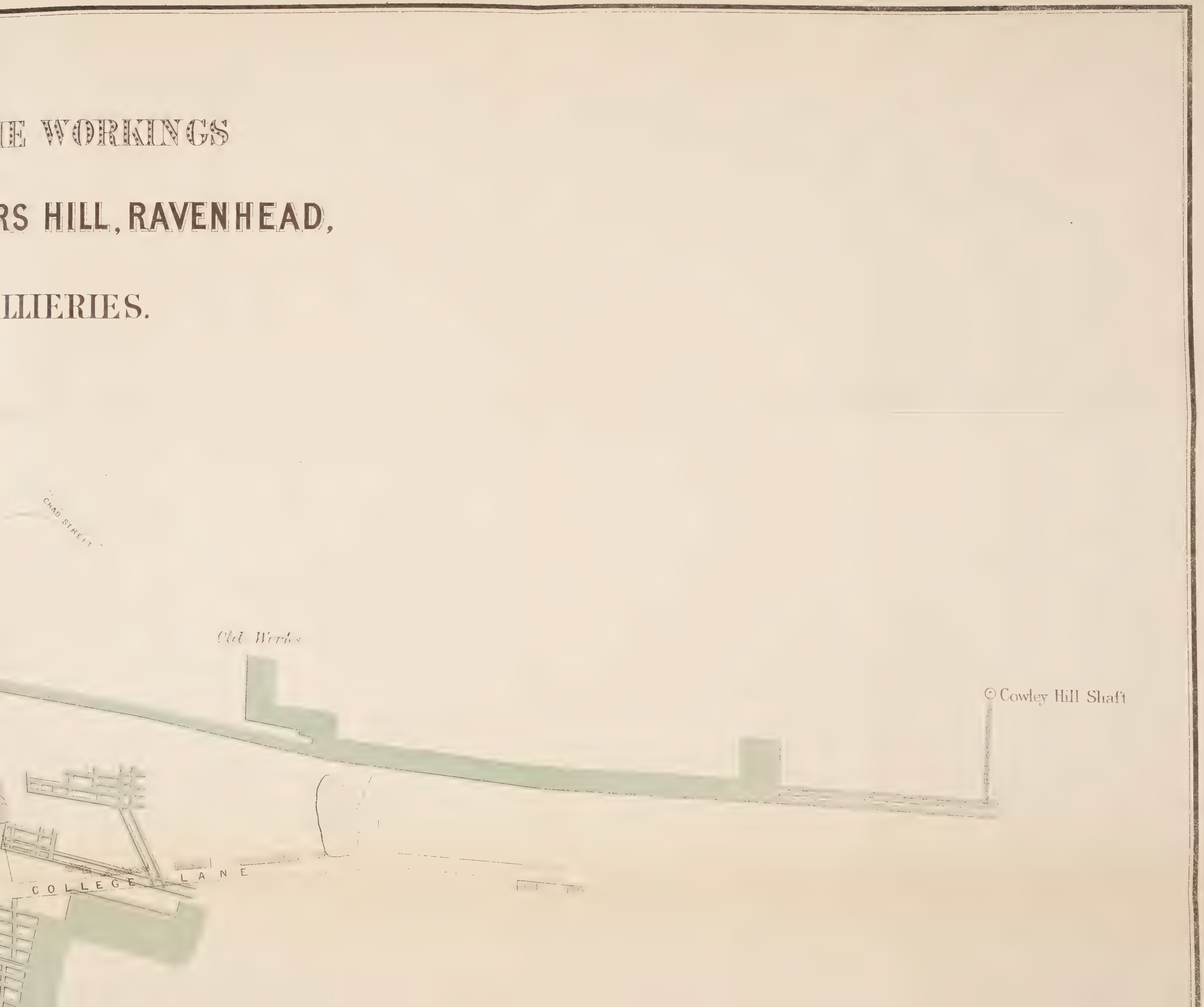
PLAN SHEWING

GERARD'S BRIDGE, CRO

A

ST HELEN'S


Croppers Hill Colliery
ECCLESTON STREET
DAM
St Thomas Church
WESTFIELD STREET
LIVERPOOL ROAD
PETER STREET
LIVERPOOL STRT
BALWIN STREET

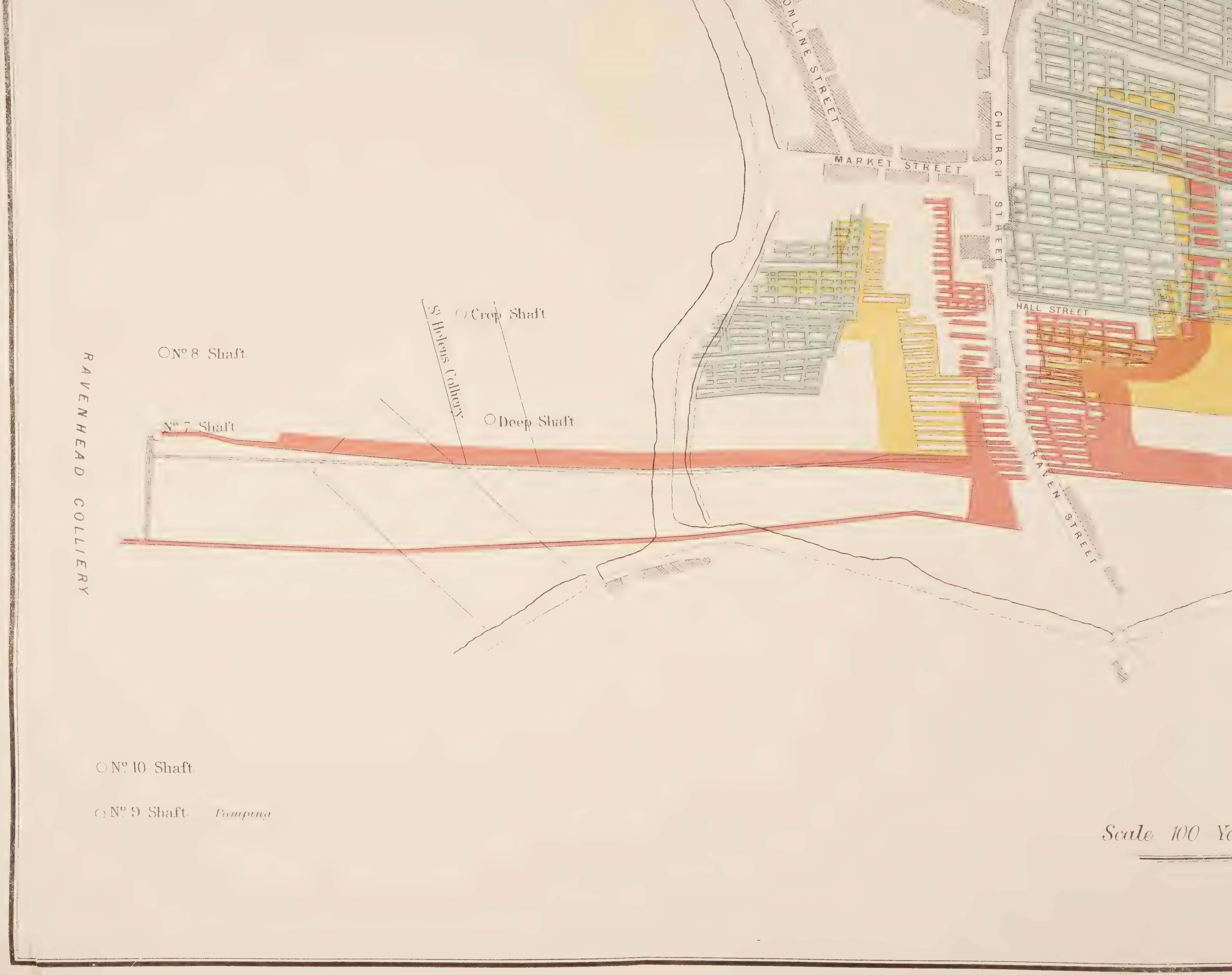


E WORKINGS

RS HILL, RAVENHEAD,

LLIERIES.

CHAD STREET
Old Works
Cowley Hill Shaft
COLLEGE LANE


ONLINE STREET
MARKET STREET
CHURCH STREET
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RAVEN STREET
RAVENHEAD COLLIERY
Nº 8 Shaft
Crop Shaft
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Deep Shaft
Nº 10 Shaft
Nº 9 Shaft
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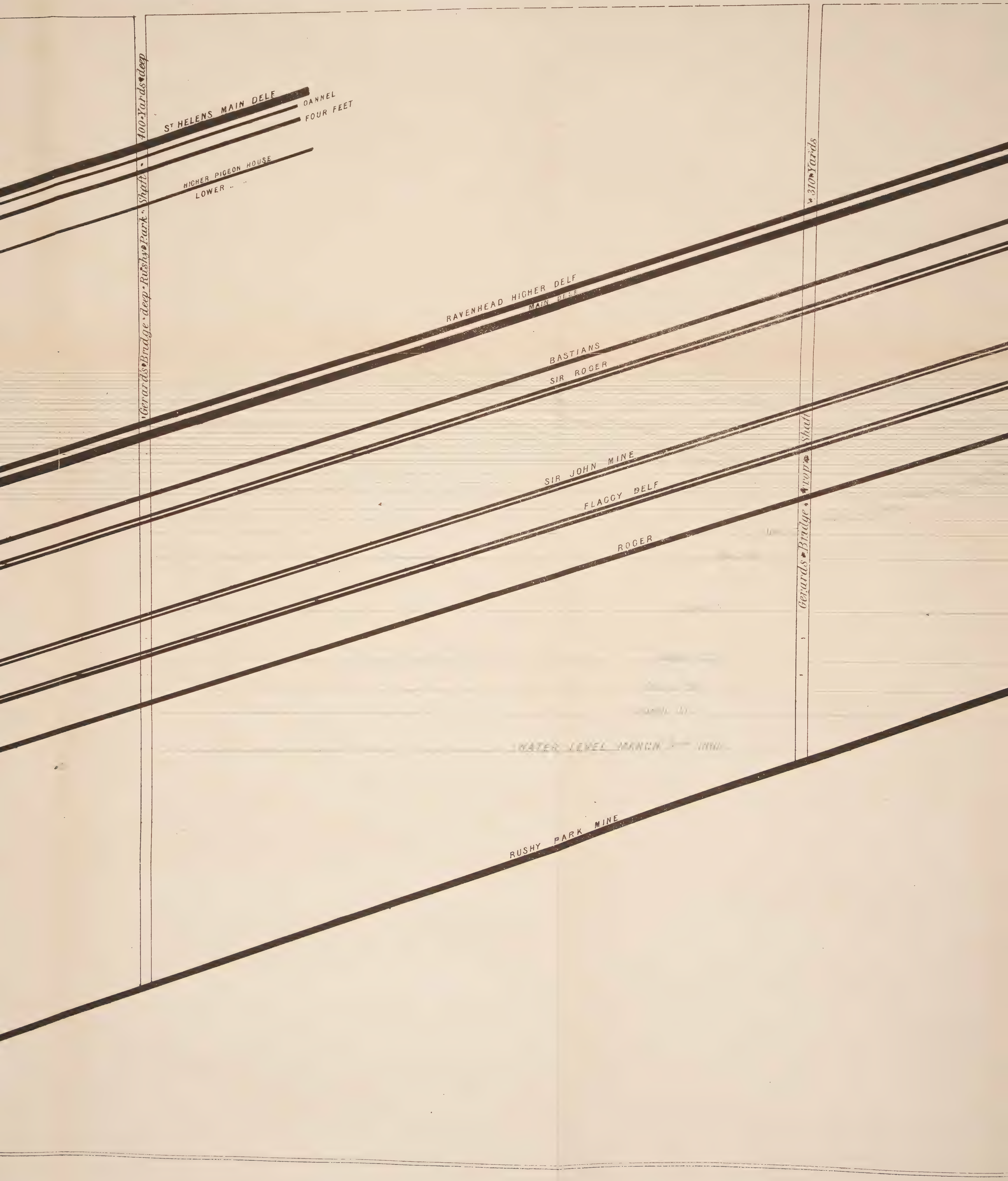
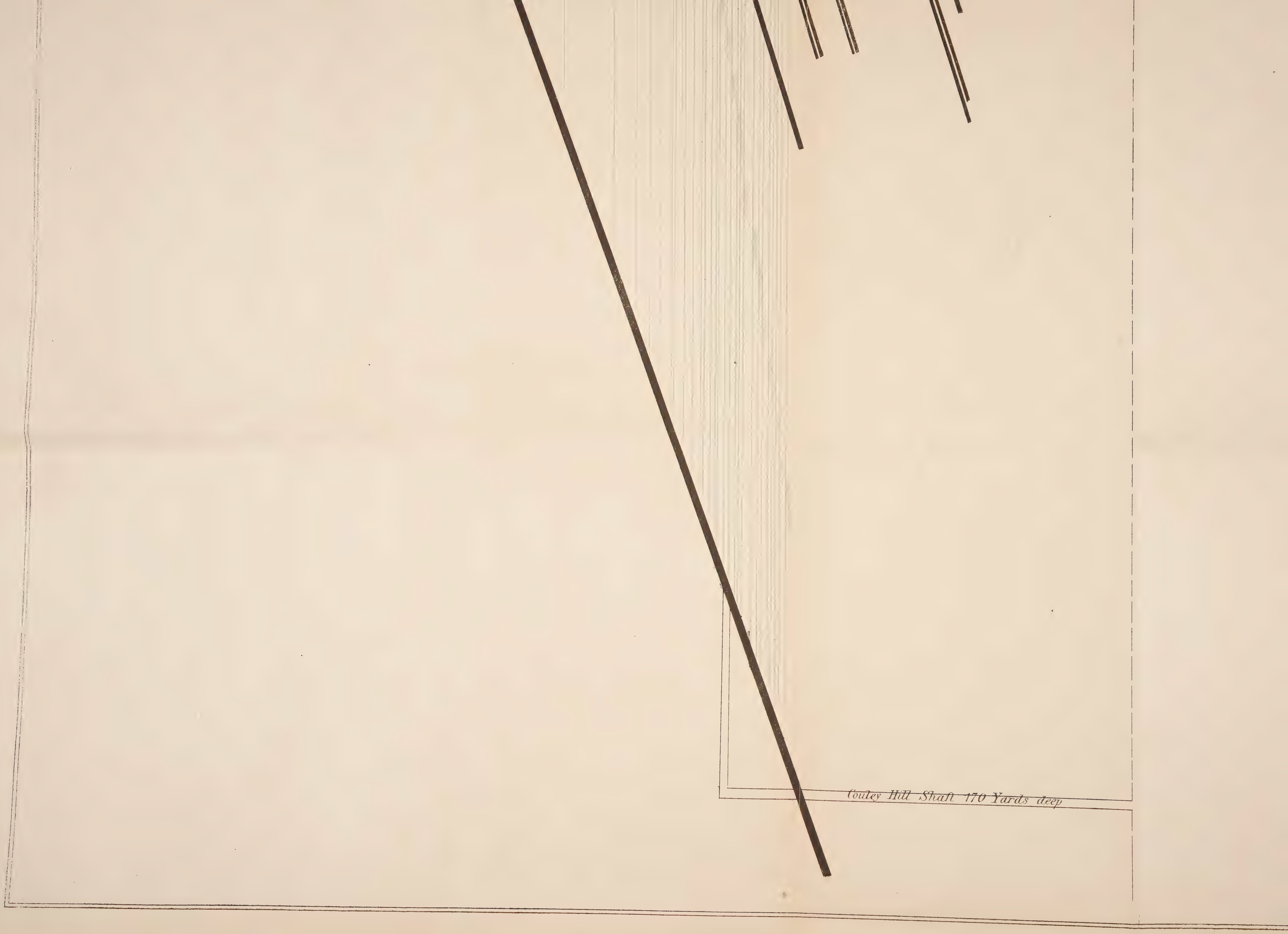
Ravenhead, and St. Helens, Collieries.


Gerards•Bridge•deep•Rushy•Park•Shaft•400•Yards•deep
St HELENS MAIN DELF
CANNEL
FOUR FEET
HIGHER PIGEON HOUSE
LOWER ..
RAVENHEAD HIGHER DELF
MAIN DELF
BASTIANS
SIR ROGER
SIR JOHN MINE
FLAGGY DELF
ROGER
Gerards•Bridge•Crop•Shaft•310•Yards
WATER LEVEL MARCH —
RUSHY PARK MINE


Couley Hill Shaft 170 Yards deep

said recited notice, the works of the said James Radley are not dangerous or defective; that the lives of the persons employed in the said Croppers Hill Colliery are not imperilled, nor is there danger of bodily injury to them the said persons by any sudden liberation of the water accumulating in Gerard's Bridge Colliery for the reasons following, that is to say: First, that before any of the water so accumulating can reach the workings of the said James Radley it must rise considerably higher in level than it now stands. Second, that when it attains such a level as to flow into the mines and works of the said James Radley it will approach in a regular stream or overflow from the said accumulation of water; and lastly, that the approach of such stream will be easy of detection, the pits in which the said water is accumulating being open and admitting of a daily admeasurement to show its height in the said pits, and consequently its level, as affecting the pit and works of the said James Radley. In witness whereof I, the said John George Blackburne, have hereunto set my hand the 20th day of August 1865.

JOHN G. BLACKBURNE.

Signed by the said John George Blackburne in
the presence of
CHAS. ED. BLACKBURNE, Clerk,
with JNO. PONSONBY, Solicitor, Oldham.

COPY OF NOTICE SENT TO JAMES HADDOCK, ESQ.

SIR, Manchester, May 12, 1865.

As inspector of coal mines and ironstone mines for the district which comprises the Ravenhead Coal Mines or Colliery, near St. Helen's in the county of Lancaster, of which you are the managing partner, I beg to give you notice, in pursuance of the 17th section of the Act for the regulation and inspection of mines, 23rd & 24th Vict. cap. 151, that I have found on inspection, examination, and inquiry, that the said Ravenhead Mines are in great danger of being suddenly flooded by water now accumulating in the workings and pits or shafts of the Old Gerard's Bridge Colliery thereunto adjoining the workings of which colliery have been recently suspended, and that the said Ravenhead Mines or Colliery are, otherwise than as provided against by any express provision of the said Act, or the general or the special rules thereunder, dangerous or defective, so as in my opinion to threaten or tend to the bodily injury of some person. And I beg to give you further notice that the grounds for my said opinion are as follows: That there is no satisfactory proof of there having been a proper, substantial, and well defined barrier portion or pillar of coal left in each mine unworked, intact, and capable of securely holding back the water now accumulating in the workings, pits, &c. of the said Gerard's Bridge Colliery, as it acquires additional pressure, which is constantly accruing; and that, in the event of the said accumulated water suddenly liberating itself, it will most certainly inundate the workings of the mines of the Ravenhead Colliery, belonging to yourself and partners, and thereby imperil the lives of the persons employed there.

Your attention is particularly called to the 17th section of the said Act, which section is attached to this notice. I am, &c.

James Haddock, Esq.
Ravenhead Colliery.

PETER HIGSON.

COPY OF THE AWARD OF THE ARBITRATOR.

To all to whom these presents shall come, I, John George Blackburne, of Oldham in the county of Lancaster, mining engineer, send greeting: Whereas Peter Higson, an inspector of coal mines and ironstone mines for the district which comprised the Ravenhead Coal Mines or Colliery, near St Helen's in the said county of Lancaster, did by writing under his hand, dated the 12th day of May 1865, give notice to James Haddock, of Ravenhead Colliery near St. Helens aforesaid, the managing partner of the said colliery, in pursuance of the 17th section of the Act for the regulation and inspection of mines 23rd & 24th Vict. cap. 151, that he the said Peter Higson had found on inspection, examination, and inquiry that the said Ravendead Mines were in great danger of being suddenly flooded by water then accumulating in the workings and pits or shafts of the old Gerard's Bridge Colliery thereunto adjoining, the workings of which colliery had then been recently suspended, and that the said Ravenhead mines or colliery were, otherwise than as provided against by any express provision of the said Act or the general or the special rules thereunder, dangerous or defective so as in the opinion of the said inspector to threaten or tend to the bodily injury of some person. And he gave the said James Haddock further notice that the grounds for his said opinion were as follows: That there was no satisfactory proof of there having been a proper substantial and well defined barrier portion or pillar of coal left in each mine unworked intact and capable of securely holding back the water then accumulating in the workings and pits of the said Gerard's Bridge Colliery, as it acquired additional pressure which was constantly accruing, and that in the event of the said accumulated water suddenly liberating itself, it would most certainly inundate the workings of the mines of the the Ravenhead Colliery belonging to himself and partners and thereby imperil the lives of the persons employed there. And whereas Messrs. Bromilow, Haddock, & Co., owners of the said colliery, did within 20 days after the receipt by them of the herein-before recited notice give notice in writing dated the 2d day of June 1865 to the said Peter Higson and also to the Right Honorable Sir George Grey, Baronet, one of Her Majesty's Principal Secretaries of State, that they objected to remove or remedy the danger or defect which was the subject of the herein-before recited notice, and that they did so on the following grounds:

1st. They denied the existence of the alleged danger or defect.

2nd. If it existed it was beyond their reach or control and they had not the power to remove or remedy it.

3rd. If it existed it was in the power of other persons to remove or remedy it.

And pursuant to the statute in that case made and provided they nominated the following five competent and disinterested persons in order that the said secretary of state might appoint one or more of them to be an arbitrator or arbitrators to determine the matters in difference, namely, Josiah Evans, coal proprietor, Samuel Stock, coal proprietor, William Greener, mining engineer, me the said John George Blackburne and William Armstrong, colliery viewer and mining engineer. And whereas the said Right Honourable Sir George Grey, Baronet, did by writing under his hand, dated the 23d day of June 1865, appoint me the said John George Blackburne, one of the five persons so nominated, to be the arbitrator to determine the matter in difference. Now, therefore, I, the said John George Blackburne, having taken upon myself the said reference and having had before me the parties thereto their attorneys and witnesses, and having heard, weighed, and considered the evidence and their several allegations and statements, and perused and examined the plans submitted to me of the mines and workings of the said Ravenhead Colliery and of the mines and workings adjoining or near thereto, the correctness of which plans so produced to me being established as far as practicable to my satisfaction, do find and award, order, and determine that although there was on the part of the said inspector probable cause to suspect the dangers apprehended and particularly mentioned in his said recited notice, the works of the said Messrs. Bromilow, Haddock, & Co. are not dangerous or defective, that the lives of the persons employed in the said Ravenhead Colliery are not imperilled nor is there danger of bodily injury to them the said persons by any sudden liberation of the water accumulating in Gerard's Bridge Colliery, there being, according to the evidence submitted to me, a substantial barrier of unworked coal left, but the said last-mentioned colliery and the works of the said Messrs Bromilow, Haddock, & Co., capable of holding back the water so accumulating and preventing any sudden influx of the said water. In witness whereof I the said John George Blackburne have hereunto set my hand this 17th day of August 1865.

Signed by the said John George Blackburne in the presence of
Chas. Ed. Blackburne, Clerk,
with Jno. Ponsonby, Solicitor, Oldham.

John G. Blackburne.

Copy of Notice sent to Messrs. Pilkington.

Manchester, May 12, 1865.

Sir,

As inspector of coal mines and ironstone mines for the district which comprises the St. Helen's Collieries near St. Helen's in the county of Lancaster, of which you are the managing partner, I beg to give you notice in pursuance of the 17th section of the Act for the regulation and inspection of mines, 23rd & 24th Vict. cap. 151, that I have found on inspection, examination, and inquiry that the said St. Helen's Colliery is in great danger of being suddenly flooded by water now accumulating in the workings and pits or shafts of the Old Gerard's Bridge Colliery thereunto adjoining, the workings of which colliery have been recently suspended, and that the said Ravenhead Mines or Colliery are otherwise than as provided against by any express provision of the said Act, or the general or the special rules thereunder, dangerous or defective so as in my opinion to threaten or tend to the bodily injury of some person. And I beg to give you further notice that the grounds for my said opinion are as follows:—That there is no satisfactory proof of there having been a proper substantial and well defined barrier portion or pillar of coal left in each mine unworked, intact and capable of securely holding back the water now accumulating in the workings, pits, &c., of the said Gerard's Bridge Colliery as it acquires additional pressure which is constantly accruing and that in the event of the said accumulated water sudddenly liberating itself it will most certainly inundate the workings of the mines of the St. Helen's Colliery belonging to yourself and partners and thereby imperil the lives of the persons employed there.

Your attention is particularly called to the 17th section of the said Act, which section is attached to this notice.

I am, &c.
Peter Higson.

Messrs. Pilkington, Brothers.

Copy of Award of the Arbitrator.

To all whom these presents shall come, I John George Blackburne of Oldham in the county of Lancaster, mining engineer, send greeting: Whereas Peter Higson, an inspector of coal mines and ironstone mines for the district, which comprised the Saint Helen's Coal Mines or Colliery in or near Saint Helen's in the county of Lancaster, did by writing under his hand, dated the 13th day of May 1865, give notice to Messieurs Pilkington of Saint Helen's aforesaid the owners of the said colliery in pursuance of the 17th section of the Act for the regulation and inspection of mines, 23d and 24th Victoria cap. 151, that he the said Peter Higson had found on inspection, examination, and inquiry, that the said Saint Helen's Mines or Colliery were in great danger of being suddenly flooded by water then accumulating in the workings and pits or shafts of the Old Gerard's Bridge Colliery thereunto adjoining, the working of which colliery had then been recently abandoned; and that the said Saint Helen's Mines or Colliery were otherwise than as provided against by any express provision of the said Act or the general or the special rules thereunder, dangerous or defective, so as in the opinion of the said inspector to threaten or tend to the bodily injury of some person. And he gave the said Messieurs Pilkington further notice that the grounds for his said opinion were as follows:—That there was no satisfactory proof of there having been proper substantial and well defined barrier portion or pillar of coal left in each of the upper mines unworked intact and capable of securely holding back the water then accumulating in the workings and pits of said Gerard's Bridge Colliery as it acquired additional pressure which was constantly accruing, and that in the event of the said accumulated water suddenly liberating itself it might inundate the pits and workings of the mines of the Saint Helen's Colliery belonging to them the said Messieurs Pilkington, and thereby imperil the lives of the persons employed there. And whereas the said Messieurs Pilkington did, within 20 days after the receipt by them of the herein-before recited notice, give notice in writing, dated the 2d day of June 1865, to the said Peter Higson and also to the Right Honourable Sir George Grey, Baronet, one of Her Majesty's Principal Secretaries of State, that they objected to remove or remedy the danger or defect which was the subject of the herein-before recited notice, and that they did so on the following grounds:

1. They denied the existence of the alleged danger or defect.
2. If it existed it was beyond their reach or control and they had not the power to remove or remedy it.
3. If it existed it was in the power of other persons to remove or remedy it.

And pursuant to the statute in that case made and provided they nominated the following five competent and disinterested persons in order that the said Secretary of State might appoint one or more of them to be an arbitrator or arbitrators to determine the matters in difference, namely, Samuel Stock, coal proprietor, Josiah Evans, coal proprietor, Thomas Foster, colliery viewer and mining engineer, me the said John George Blackburne, and William Armstrong, colliery viewer and mining engineer. And whereas the said Right Honourable Sir George Grey, Baronet, did by writing under his hand dated the 23d day of June 1865, appoint me the said John George Blackburne one of the five persons so nominated to be the arbitrator to determine the matter in difference: Now, therefore, I, the said John George Blackburne, having taken upon myself the said reference, and having had before me the parties thereto, their attornies and witnesses, and having heard weighed and considered the evidence, and their several allegations and statements, and perused and examined the plans submitted to me of the mines and workings of the said Saint Helen's Colliery, and of the mines and workings adjoining or near thereto, the correctness of which plans so produced to me being established as far as practicable to my satisfaction, do find, award, order, and determine that although there was on the part of the said inspector probable cause to suspect the dangers apprehended and particularly mentioned in the said recited notice, the works of the said Messieurs Pilkington are not dangerous or defective, that the lives of the persons employed in the said Saint Helen's Colliery are not imperilled, nor is there danger of bodily injury to them the said persons by any sudden liberation of the water accumulating in Gerard's Bridge Colliery, there being, according to the evidence submitted to me, a substantial barrier of unworked coal left between the said last-mentioned colliery and the works of the said Messieurs Pilkington capable of holding back the water so accumulating and preventing any sudden influx of the said water. In witness whereof I the said John George Blackburne have hereunto set my hand the 17th day of August 1865.

Signed by the said John George Blackburne in the presence of
Chas. Ed. Blackburne, Clerk,
with Jno. Ponsonby, Solicitor, Oldham.

John G. Blackburne.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS OF LIFE arising therefrom, in the WEST LANCASHIRE and NORTH WALES DISTRICT, during the Year ended December 31, 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. Jan. 4	1	Douglas Bank	Wigan	Jno. G. Morris	—	Sinker	–	The five deceased and several other persons were at work at the bottom of a new shaft 16 feet in diameter and 500 yard deep. The sides had been just cased or lined throughout, but upon their beginning to sink, another length, about 200 yards in depth, collapsed.	–	–	1	–	–
,, ,,		Ditto	Ditto	Ditto	—	Do.	–		–	–	1	–	–
,, ,,		Ditto	Ditto	Ditto	—	Do.	–		–	–	1	–	–
,, ,,		Ditto	Ditto	Ditto	—	Do.	–		–	–	1	–	–
,, ,,		Ditto	Ditto	Ditto	—	Do.	–		–	–	1	–	–
,, 5	2	Haydock	St. Helen's	Richard Evans & Co.	James Whittle	Drawer	22	Fall of roof	–	1	–	–	–
,, 11	3	Black Park	Chirk	Jno. A. Milne and Co.	—	Do.	13	Ditto	–	1	–	–	–
,, 12	4	Broomfield	Standish nr. Wigan	Thomas Stone	William Collier	Banksman	–	Falling in the shaft	–	–	1	–	–
,, 13	5	Peasley Cross	St. Helen's	Bournes and Robinson	Thomas Gardiner	Labourer	38	By railway trucks above ground	–	–	–	–	1
,, ,,	6	Trood	Wrexham	Sparrow and Poole	Samuel Jones	Ditto	19	Falling into the shaft from the surface	–	–	1	–	–
,, 15	7	Newtown	Wigan	Lamb and Moore	Oliver Kilshaw	Collier	–	Fall of roof in Pemberton 4-feet mine	–	1	–	–	–
,, 28	8	Mostyn	Holywell	Mostyn Colliery Co.	Edward Hughes	Labourer	25	A piece of iron falling down the pit from the surface and killing him as he stood in the cage and the bottom.	–	–	1	–	–
Feb. 15	9	Park Lane	Wigan	Mercer and Evans	William Shaw	Collier	26	Fall of coal in Pemberton 4-feet mine	–	1	–	–	–
,, ,,	10	Prospect Standish.	Ditto	Standish and Shevington Cannel Co.	William Naylor	Drawer	14	Run over by a tub in the Cannel mine.	–	–	–	1	–
,, 16	11	Ince Moss	Ditto	Pearson and Knowles	Richard Eatock	Sinker	33	A tub full of mortar accidentally capsized into the shaft in which he was working on a scaffold.	–	–	1	–	–
,, 19	12	The Sankey Brook.	St. Helen's	Sankey Brook Colliery Co. Limited.	Joseph Smith	Collier	–	An explosion of gas	1	–	–	–	–
,, 23	13	The Springs	Wigan	Pearson and Knowles	Margaret Barker	Coal setter	17	Being crushed between coal trucks above ground.	–	–	–	–	1
,, ,,	14	Ewloe Hall	Buckley Mold	Ewloe Hall Colliery Co.	Charles Williams	Drawer	21	Fall of roof	–	1	–	–	–
Mar. 1	15	The Moss House	Rainford St. Helen's	The Moss House Coal Co.	William Burrows	Collier	23	Fall of roof in Little Delf mine	–	1	–	–	–
,, 3	16	Haydock	St. Helen's	Richard Evans and Co.	James Unsworth	Ditto	48	Ditto ditto in the Main Delf Queen pit	–	1	–	–	–
								Carried forward	1	7	9	1	2

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost. Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
								Brought forward	1	7	9	1	2
1865. Mar. 4	17	Mesnes	Wigan	Peter Taylor and Co.	Edward Gibson	Drawer	14	Breaking of a rope on the engine plane	–	–	–	1	–
„ 9	18	A pit	Ruabon	The New British Iron Co.	William Jones	Stoker	33	Collapsing of a boiler flue on the surface.	–	–	–	–	1
„ 11	19	Moss	Wigan	Pearson and Knowles	Charles Lawrence	Engine tenter	14	Falling upon the machinery below ground when it was in motion.	–	–	–	1	–
„ 13	20	Bromfield	Mold	The Bromfield Colliery Co.	John Shone	Collier	–	An explosion	1	–	–	–	–
„ 15	21	Wall Hey, Aspull	Wigan	Earl of Crawford & Balcarres	Thomas Moore	Collier	–	Breaking of a wire rope guide	–	–	1	–	–
„ 17	22	The Pewfall C.	St. Helen's	Richard Evans and Co.	Peter Meadows	Fireman	30	Fall of roof while fixing timber	–	1	–	–	–
„ 18	23	Peasley Cross	Do.	Bournes and Robinson	John Molyneux	Collier	25	An explosion of gas	1	–	–	–	–
„ 20	24	Holland	Upholland, Wigan	Earl of Crawford & Balcarres	George Hunt	Labourer	21	Fall of roof in the Linsay mine	–	1	–	–	–
April 1	25	Brymbo	Wrexham	The Brymbo Coal & Iron Co.	Thomas Price	Drawer	15	An explosion of gas	1	–	–	–	–
„ 6	26	The Pewfall	St. Helen's	Richard Evans and Co.	Thomas Byrom	Collier	28	Fall of roof in the Main Delf mine	–	1	–	–	–
„ 12	27	Black Park	Chirk	John Stott Milne and Co.	John James	Labourer	21	Being injured by railway trucks above ground.	–	–	–	–	1
„ „	28	Westminster	Wrexham	The Westminster Coal Co.	Patrick Crane	Ditto	–	Ditto ditto ditto	–	–	–	–	1
„ 21	29	Blackleyhurst	St. Helen's	Samuel Stock	Jos. Lowe	Drawer	16	Fall of bricks from the side of the shaft	–	–	1	–	–
„ 24	30	Blackleyhurst	Ditto	Ditto	Richard Mather	Engine tenter	19	Bursting of a steam boiler	–	–	–	–	1
„ „	31	The Lindsay's pits, Haigh.	Wigan	Earl of Crawford and Balcarres.	John Darbyshire	Collier	17	Fall of roof in the Cannel mine	–	1	–	–	–
„ 25	32	Bickerstaffe	Ormskirk	Bromilow, Forster and Co.	William Cropper	Ditto	–	Ditto ditto in the Blaguegate mine	–	1	–	–	–
May 5	33	Blackleyhurst	St. Helen's	Samuel Stock	William Cunliffe	Underlooker	43	Foster and Walsh were employed to take down and rebuild an arch near the eye of the pit and Cunliffe was showing them how to proceed when it fell upon them.	–	–	–	1	–
„ „		Ditto	Ditto	Ditto	Thomas Foster	Bricklayer	43		–	–	–	1	–
„ „		Ditto	Ditto	Ditto	Edward Walsh	Labourer	27		–	–	–	1	–
„ 8	34	Aston Hall	Buckley, Mold	Messrs. Fenton and Co.	Thomas Jones	Collier	45	Fall of roof in the Wall Bench mine	–	1	–	–	–
„ 11	35	The Lindsay pits, Haigh.	Wigan	Earl of Crawford and Balcarres.	Matthew Henry	Metal man	21	Fall of stone from the side of a tunnel which he was driving.	–	1	–	–	–
„ 11	36	Hindley	Wigan	Kirkless Hall Co.	Thomas Barlow	Pony driver	13	Run over on the waggon road by a train of tubs he was taking to the pit eye.	–	–	–	1	–
								Carried forward	4	14	11	7	6

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865.								Brought forward -	4	14	11	7	6
May 12	37	Back Hill -	Wigan - -	Richard Norriss - -	George Hope - John Crofton -	Drawers	10 11	Fall of roof which the fireman had reported to be safe a short time before.	–	2	–	–	–
" 19	38	Haydock -	St. Helen's -	Richard Evans and Co. -	John Wadsworth -	Collier -	24	Fall of roofs in Main Delf Lea pit -	–	1	–	–	–
" "	39	Ravenhead -	St. Helen's -	Bromilow, Haddock, & Co.	George Leather -	Sinker -	27	A shot going off before he could get out of the way.	–	–	–	1	–
" 24	40	Newtown -	Wigan - -	Lamb and Moore - -	Joseph McClarence	Collier -	43	Fall of roof in the Pemberton 5-feet mine.	–	1	–	–	–
" 30	41	Tawd Vale -	Ormskirk - -	The Tawd Vale Colliery Co.	Henry Ashcroft -	Collier -	22	Fall of coal in the Main Delf -	–	1	–	–	–
June 8	42	Plaskynaston .	Ruabon, Denbighshire.	The Plaskynaston Colliery Company.	Samuel Lees -	Hooker-on -	20	Deceased was standing in the eye of the pit when the descending cage hit him.	–	–	1	–	–
" 12	43	Haydock -	St. Helen's -	Richard Evans and Co. -	Joseph Bramley -	Collier -	25	An explosion of powder - -	1	–	–	–	–
" 16	44	Aspull - -	Wigan - -	Earl of Crawford and Balcarres.	Richard Kay -	Sinker -	34	Drilling out a shot which had missed fire when it exploded.	–	–	–	1	–
" 20	45	Hafod - -	Wrexham -	The Ruabon Coal Co. -	Wm. N. Williams -	Ditto -	30	A piece of stone falling upon him while he was working at the bottom of a sinking pit.	–	–	1	–	–
" 27	46	Tawd Vale -	Ormskirk - -	The Tawd Vale Coal Co.	Thomas Bentham -	Hooker-on	24	An explosion of firedamp in the main coal.	1	–	–	–	–
		Ditto - -	Ditto - -	Ditto -	William Rigby -	Drawer -	13	Ditto ditto ditto	1	–	–	–	–
		Ditto - -	Ditto - -	Ditto -	William Chisnall -	Ditto -	14	Ditto ditto ditto	1	–	–	–	–
" "	47	Black Park -	Chirk - -	John Stott Milne - -	William Fieldhouse	Drawer -	13	Some loaded waggons getting unhooked and running down an incline	–	–	–	1	–
" "	48	Ravenhead -	St. Helen's -	Bromilow, Haddock, & Co.	Henry Halsall -	Engine tenter	–	Falling off a scaffold in the engine house while packing the piston of the pumping engine.	–	–	–	–	1
" 30	49	Lindsay Pits -	Haigh, Wigan -	Earl of Crawford and Balcarres.	Thomas Topping -	Hooker-on	–	The cage had to be stopped at a mouthing a few yards from the bottom when deceased got out by mistake.	–	–	–	1	–
								Carried forward -	8	19	13	11	7

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost. Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
								Brought forward -	8	19	13	11	7
1865. July 5	50	Sankey Brook -	St. Helen's -	The Sankey Brook Coal Company.	Ann Highcock -	Coal dresser	19	Falling from one stage to another, about 7 feet, along with a pit-box she was pushing.	–	–	–	–	1
„ 7	51	Berrington Lane	Ditto - -	Thomas Whaleys - -	Charles Birch -	Collier -	–	Fall of roof in the Rushy Park mine	–	1	–	–	–
„ 8	52	Laffak - -	Ditto - -	John and J. Johnson -	Thomas Webster -	Ditto -	27	Fall of roof in the Little Delf mine	–	1	–	–	–
„ 9	53	Moss House -	Ramford, St. Helen's -	Moss House Coal Company	William Greener -	Viewer -	44	Ditto ditto	–	1	–	–	–
„ 14	54	Almond Brook	Standish, Wigan	John Taylor and Son -	John Golding -	Collier -	25	Deceased fell out of the cage while ascending the pit.	–	–	1	–	–
„ 29	55	East Cannel pits	Ince, Wigan -	Ince Hall Coal and Cannel Company.	Henry Barns -	Labourer -	19	Crushed by railway trucks above ground.	–	–	–	–	1
„ 22	56	Springs - -	Ince, Wigan -	Pearson and Knowles -	William Dyson -	Collier -	22	An explosion of gunpowder -	1	–	–	–	–
„ 25	57	Platt Lane -	Wigan - -	Henry Wright & Co. -	Henry Fairhurst -	Bricksetter	–	Fall of stone from the side of the pit during repairs.	–	–	1	–	–
		—	—	Ditto - - -	Peter Haddock -	Labourer -	–	Ditto ditto ditto	–	–	1	–	–
Aug. 5	58	Blackleyhurst	St. Helen's -	Samuel Stock - -	Darius Roby -	Breaksman	45	From injuries by coal trucks on the surface railway	–	–	–	–	1
„	59	Vron - -	Wrexham -	Maurice and Low -	David Williams -	Collier -	24	Fall of roof in main coal - -	–	1	–	–	–
„ 7	60	Northop Hall -	Flint - -	The Northop Hall and Dublin Coal Company.	Hooker-on -	—	–	Injuries while getting into the cage	–	–	–	1	–
„ 8	61	Swan Lane -	Hindley, Wigan	John Johnson - -	James Whittle -	Sinker -	43	A fall of shale from the side of a pit which was being sunk.	–	–	1	–	–
„ 10	62	Blackleyhurst	St. Helen's -	Samuel Stock - -	James Bennett -	Collier -	33	Fall of roof in the Little Delf mine	–	1	–	–	–
„ 15	63	Bridge pit, Haigh.	Haigh, Wigan -	Earl of Crawford and Balcarres.	Thomas Jones -	Pony driver	–	Crushed by trains and tubs below ground.	–	–	–	1	–
„ 20	64	Croppers Hill -	St. Helen's -	James Radley - -	Peter Anders -	Collier -	55	Fall of roof coal in the Rushy Park mine.	–	1	–	–	–
„ 26	65	Pemberton -	Pemberton, Wigan	Jonathan Blundell & Son	Thomas Howarth -	Pony driver	13	Run over by a train of full tubs below ground.	–	–	–	1	–
Sept. 7	66	Brynn Hall -	Ashton, Wigan -	Smith and Company -	William Knowles -	Bricksetter	43	Fall of roof while putting in a furness arch.	–	1	–	–	–
								Carried forward -	9	26	17	14	10

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865.								Brought forward	9	26	17	14	10
Sept. 9	67	Hanmer	Mostyn, Holywell	Eyton and Elliot	Thomas Roberts	Bank laborer	60	From injuries by coal trucks on the surface railway.	–	–	–	–	1
	68	Kirkless Hall	Kirkless, Wigan	Kirkless Hall Coal and Iron Company.	Sarah Broadhurst	Coaldresser	29	Ditto ditto	–	–	–	–	1
„ 12	69	California	Aspull, Wigan	Ditto	E. Anderton	Colliers	–	The rope breaking by slipping off the drum as the deceased were ascending the pit. It was a conical or compensating drum without groves.	–	–	1	–	–
		Ditto	Ditto	Ditto	John Dunn		–		–	–	1	–	–
		Ditto	Ditto	Ditto	J. Ramsdale		–		–	–	1	–	–
		Ditto	Ditto	Ditto	G. Ingram		–		–	–	1	–	–
		Ditto	Ditto	Ditto	R. Fletcher		–		–	–	1	–	–
		Ditto	Ditto	Ditto	W. Bradshaw		–		–	–	1	–	–
		Ditto	Ditto	Ditto	Robert Ealock		–		–	–	1	–	–
		Ditto	Ditto	Ditto	John Holland		–		–	–	1	–	–
„ 12	70	Brynmally	Wrexham	Thomas Clayton	Wm. Jones	Collier	19	Fall of coal at a slip in Brassey mine	–	1	–	–	–
„ 14	71	Sankey Brook	St. Helen's	Sankey Brook Coal Compy.	James Kay	Drawer	17	Fall of coal Little Delf mine	–	1	–	–	–
„ 14	72	Garswood Park	Ditto	David Bromilow & Co.	Thomas Stockley	Collier	42	Fall of roof	–	1	–	–	–
„ 15	73	Tryddyn	Mold	Flintshire Oil & Cannel Co.	Ellis Roberts	Banksman	38	Falling into the pit from the surface	–	–	1	–	–
„ 20	74	Newton	Wigan	Lamb and Moore	John Murray	Hooker-on	16	Fall of coal off an ascending tub	–	–	1	–	–
„ 21	75	Heskin	Chorley	Thomas Whaley	Joseph Watson	Ditto	51	The signal hammer got loose and fell upon from the top of the pit.	–	–	1	–	–
Oct. 7	76	Park Lane	Ashton, Wigan	Mercer and Evans	P. Wilkinson	Banksman	46	Deceased fell off the coal screen on the pit bank.	–	–	–	–	1
„ 11	77	White Moss	Blaquegate, Ormskirk.	Lord Skelmersdale	Samuel Griffiths	Sinker	38	Deceased fell out of the bucket into some water in a sinking pit.	–	–	1	–	–
„ 16	78	Gidlow Lane	Standish, Wigan	The Kirkless Hall Coal and Iron Company.	Thomas Topping	Ditto	50	In this case death was caused by an iron drill falling off the ascending bucket.	–	–	1	–	–
„ 17	79	Ewloe Hall	Buckley, Mold	Ewloe Hall Coal Compy.	Peter Davidson	Collier	40	Fall of roof	–	1	–	–	–
„ 20	80	Gardden Lodge	Ruabon, Denbighshire.	Gardden Lodge Colliery Company.	Edward Griffiths	Ditto	47	By the rope breaking	–	–	1	–	–
„ „	81	Ince Hall	Ince, Wigan	Ince Hall Coal & Cannel Company.	James Anderton	Ditto	40	Fall of roof	–	1	–	–	–
								Carried forward	9	31	31	14	13

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
								Brought forward -	9	31	31	14	13
1865. Oct. 25	82	St. Helen's -	St. Helen's -	Messrs. Pilkington -	Charles Hamson -	Drawer -	17	Run over by a tub on a self-acting plane.	–	–	–	1	–
Nov. 3	83	Welch Whittle	Nr. Chorley -	James Darlington - -	Thomas Turner -	Collier -	35	Fall of roof - - - -	–	1	–	–	–
,, 6	84	Gidlow Lane -	Wigan - -	Wigan Coal & Iron Co. -	Martin Easton -	Drawer -	29	Falling in shaft from yard coal to Arley Mine.	–	–	1	–	–
,, 7	85	Frood - -	Wrexham -	Sparrow and Poole -	Samuel Davies -	Collier -	25	Fall of roof - - - -	–	1	–	–	–
,, ,,	86	Strangeways Hall.	Wigan - -	Strangeways Hall Colliery Company.	Thomas Killpig -	Labourer -	–	An explosion of gas - - -	1	–	–	–	–
					Robt. Marsh -	Ditto -	–	Ditto ditto - - -	1	–	–	–	–
,, 8	87	Norley -	Do. - -	Norley Colliery Co. -	Peter Aspye -	Collier -	–	Fall of coal in which a shot had been fired.	–	1	–	–	–
,, 10	88	Bickershaw -	Do. - -	Ackers, Whitley & Co. -	Wm. Ackers -	Enginewright	61	Being bruised by a tub at the pit eye	–	–	–	1	–
,, 14	89	Vron - -	Wrexham -	Maurice & Low - -	John Ellis -	Trapper -	13	Falling against a train of pit tubs	–	–	–	1	–
,, 15	90	Blackleyhurst	St. Helen's -	Samuel Stock - -	Lucy Berry -	Coalscreener	36	Being crushed between a coal screen and a loaded railway truck -	–	–	–	–	1
,, 18	91	Ince Hall -	Wigan - -	Ince Hall Coal and Cannel Company.	Samuel Appleton -	Collier -	50	Fall of coal near a vault - -	–	1	–	–	–
,, 22	92	Ruabon - -	Ruabon, Wrexham	Ruabon Coal Co. Limited.	Edward Powell -	Ditto -	28	Fall of roof - - - -	–	1	–	–	–
,, 23	93	Pewfall - -	St Helen's -	Richard Evans & Co. -	Wm. Saunders -	Ditto -	–	Crushed by trains and tubs below ground.	–	–	–	1	–
,, 26	94	Standish - -	Wigan - -	Standish and Shevington Cannel Company.	Thomas Wall -	Drawer -	17	Run over by a loaded tub.	–	–	–	1	–
,, 28	95	Vron - -	Wrexham -	Maurice and Low - -	John Roberts -	Collier -	24	Fall of coal - - - -	–	1	–	–	–
Dec. 1	96	Brynkinalt Colliery.	Chirk - -	Brynkinalt Colliery Co. -	Samuel Cash -	Ditto -	–	An explosion of fire-damp - -	1	–	–	–	–
,, 2	97	Hammer Colliery	Holywell - -	Eyton and Elliot - -	George Profit -	Ditto -	–	Fall of roof - - - -	–	1	–	–	–
,, 22	98	Hindley do.	Wigan - -	Wigan Coal & Iron Co. -	John Starfiker -	Overlooker	46	Crushed by railway trucks - -	–	–	–	–	1
,, 26	99	Old Ince Hall	Ditto - -	Robert James & Co. -	John Corrigan -	Collier -	46	An explosion of fire-damp - -	1	–	–	–	–
									13	38	32	19	15

SUMMARY of the FATAL COLLIERY ACCIDENTS and LOSS OF LIFE in the WEST LANCASHIRE and NORTH WALES DISTRICT during the Half-year ending 31st December 1865.

No. of Accident.	Name of Colliery.	Where situate.	Owners or Agents Name.	Explosions.	Falls off Roof.	In Shafts.	Miscellaneous.	Above Ground.	TOTAL.
1	Aston Hall -	Hawarden -	Messrs. Fenton & Co. - -	–	1	–	–	–	1
3	Black Park -	Chirk - -	John Stott Milne - - -	–	1	–	1	1	3
6	Blackleyhurst -	St. Helens -	Saml. Stock - - - -	–	1	1	3	3	8
1	Bark Hill - -	Wigan -	Richard Norriss - - -	–	2	–	–	–	2
1	Bickerstaffe -	Ormskirk -	Dd. Bromilow & Co. - -	–	1	–	–	–	1
1	Brymbo - -	Wrexham -	Brymbo Company - - -	1	–	–	–	–	1
1	Bromfield - -	Mold - -	Bromfield Hall Company -	1	–	–	–	–	1
1	Broomfield - -	Standish -	Thomas Stone - - -	–	–	1	–	–	1
1	Berrington Lane -	St. Helens -	Thomas Whaley - - -	–	1	–	–	–	1
1	Brynn Hall -	Wigan (Ashton)	Smith and Son - - -	–	1	–	–	–	1
1	Brynmally - -	Wrexham -	Thomas Clayton - - -	–	1	–	–	–	1
1	Bickershaw -	Wigan -	Ackers, Whitley and Co. -	–	–	–	1	–	1
1	Brynkinalt - -	Chirk - -	Brynkinalt Company - -	1	–	–	–	–	1
1	Croppers Hill - -	St. Helens -	James Radley - - -	–	1	–	–	–	1
1	Douglas Bank -	Wigan -	John Grant Morriss - -	–	–	5	–	–	5
2	Ewloe Hall - -	Buckley -	Ewloe Hall Company - -	–	2	–	–	–	2
2	Frood - - -	Wrexham -	Sparrows and Poole - -	–	1	1	–	–	2
1	Gardden Lodge -	Ruabon -	Gardden Lodge Colliery Co.	–	–	1	–	–	1
1	Garswood Park -	St. Helens -	Messrs. Bromilow - - -	–	1	–	–	–	1
1	Hafod - - -	Wrexham -	Ruabon Coal Company - -	–	–	1	–	–	1
1	Heskin - - -	Chorley -	Thomas Whaley - - -	–	–	1	–	–	1
7	Haydock - -								
6	Pewfall and Edge Green	St. Helens -	Richard Evans and Sons -	1	5	–	1	–	7
1	Haigh and Aspull -	Wigan -	The Earl of Crawford and Balcarres.	–	2	1	3	–	6
1	Holland - - -	„ „	„ „	–	1	–	–	–	1
2	Hanmer - - -	Holywell -	Eyton and Elliot - - -	–	1	–	–	1	2
3	Ince Hall - -	Wigan -	Ince Hall Coal and Cannel Co.	–	2	–	–	1	3
1	Old Ince Hall - -	Ditto -	Robert James - - -	1	–	–	–	–	1
1	Hindley and California, Kirkless Hall,	Ditto -	Kirkless Hall Company - -	–	–	8	1	2	11
1	Laffak - - -	St. Helens -	J. T. Johnson - - -	–	1	–	–	–	1
1	Mostyn - - -	Holywell -	The Mostyn Colliery Company	–	–	1	–	–	1
2	Moss House - -	Rainford -	Fowler and Blackwell - -	–	2	–	–	–	2
1	Mesnes - - -	Wigan -	Peter Taylor and Co. -	–	–	–	1	–	1
1	Northop Hall - -	Flint - -	The Northots Hall Company -	–	–	–	1	–	1
1	Norley - - -	Wigan -	The Norley Company - -	–	1	–	–	–	1
3	Newtown - -	Ditto -	Lamb and Moore - - -	–	2	1	–	–	3
2	Peasley Cross - -	St. Helens -	Bournes and Robinson - -	1	–	–	–	1	2
1	Park Lane and High Brooks	Wigan -	Mercer and Evans - -	–	1	–	–	1	2
1	Plaskynaston - -	Ruabon -	The Plaskynaston Company -	–	–	1	–	–	1
1	Platt Lane - -	Wigan -	Henry Wright and Co. -	–	–	2	–	–	2
1	Pemberton - -	Ditto -	Jonthn. Blundell - - -	–	–	–	1	–	1
1	Ruabon - - -	Ruabon -	Ruabon Coal Company - -	–	1	–	–	–	1
1	Ravenhead - -	St. Helens -	Bromilow and Haddock - -	–	–	–	1	1	2
2	Standish & Shevington	Wigan -	Standish and Shevington Co.	–	–	–	2	–	2
4	Springs Ince Hall and Barley Brook. -	„ „	Pearson and Knowles - -	1	–	1	1	1	4
3	Sankey Brook - -	St. Helens -	Sankey Brook Company - -	1	1	–	–	1	3
2	Standish - - -	Wigan -	John Taylor and Son - -	–	–	1	–	–	1
1	Do. do. - -	„ „	Kirkless Hall Company - -	–	–	2	–	–	2
1	Swan Lane - -	„ „	John Johnson - - -	–	–	1	–	–	1
1	St. Helens - -	St. Helens -	Messrs. Pilkington - -	–	–	–	1	–	1
1	Strangeways Hall -	Wigan -	J. Heyes - - - -	2	–	–	–	–	2
2	Tawd Vale - -	Ormskirk -	The Tawd Vale Company -	3	1	–	–	–	4
1	Tryddyn - - -	Mold - -	The North Wales Canal Co. -	–	–	1	–	–	1
3	Vron - - -	Wrexham -	Maurice and Son - - -	–	2	–	1	–	3
1	Welch Whittle - -	Chorley -	James Darlington - - -	–	1	–	–	–	1
1	White Moss - -	Ormskirk -	Lord Skelmersdale - -	–	–	1	–	–	1
1	Westminster - -	Wrexham -	The Westminster Company -	–	–	–	–	1	1
1	Wynnslay - -	Ruabon -	The New British Iron Co. -	–	–	–	–	1	1
99				13	38	32	19	15	117

Mr. Evans' Report.

REPORT on the INSPECTION of COAL MINES, and the MINES of IRONSTONE of the COAL MEASURES worked in connexion with COAL, in the DISTRICT comprising the COUNTIES of DERBY, NOTTINGHAM, LEICESTER, and WARWICK, for the Year ended 31st December 1865.—By THOMAS EVANS, Esq., F.G.S.

SIR,

Belper, March 1, 1866.

I HAVE the honour to submit herewith my annual report on the working of the Acts of Parliament for the Regulation and Inspection of Coal Mines, and the Mines of Ironstone of the coal measures. The accompanying schedule contains a list of the separate accidents and lives lost during the year, and it will be seen that the number of fatal accidents has been greater than in any of the nine preceding years.

On reference to the reports of the late Inspector of this district I find the total number of deaths for the nine years ended 31st December 1864 was 464, and the coal raised 53,435,319 tons; or one life lost to 115,433 tons worked; last year the returns show 82 deaths, and 7,575,000 tons coal raised, or one life lost to 92,383 tons worked.

I cannot offer any reasonable explanation why there should have been such an extraordinary and sudden augmentation in the death-rate; it may be said there was a much larger quantity of coal raised, and this of itself would add to the risk and danger of working, but I do not think that is a sufficient reason to account for the loss of 82 lives.

Deaths.	Explosions.	Inundation of Water.	Falls of Coal and Roof.	In Shafts.	Crushed by Trams and Tubs, &c.	Total.	Tons of Coal raised.	Tons raised for each Death.
In 1856	3	–	21	16	6	46	4,500,000	97,000
1857	15	–	14	6	20	55	4,750,000	86,000
1858	–	–	16	16	10	42	5,060,000	121,000
1859	2	–	18	13	7	40	5,460,000	134,000
1860	3	–	21	13	13	50	6,215,000	124,000
1861	3	23	21	15	7	69	6,503,319	94,000
1862	2	–	25	4	12	43	6,647,000	154,000
1863	4	5	26	9	8	52	7,000,000	134,000
1864	11	–	30	9	16	66	7,300,000	110.606
1865	9	–	36	13	24	82	7,575,000	92,383

Explosions of gas.

There have been but two fatal explosions of gas during the year, they were attended with the loss of nine lives.

Falls of ro

Falls of roof and sides of working places are six in excess of the year 1864. I have so often in previous reports pointed out that this is the chief source of accident to the miner, and to a great extent his own safety depends on his judgment, and the care he exercises in protecting and making safe the roof and sides of his working. I think in a district like this which is being so quickly developed, the consequent demand for labour and the high rate of wages secures a supply of "hands," but generally inexperienced and often wholly unacquainted with the work they undertake to perform. The workings should be examined, in fact each man should be seen at least once a day by the overlooker or a properly qualified deputy, the condition of the roof pointed out to him, and if necessary means employed to render it safe. Nothing in my opinion but the direct supervision of those in immediate authority will lessen this sad and deplorable cause of accident. I have often myself seen cases in which there has been a great want of the proper use of timber; it does not arise as a rule from the want of supply, but pure carelessness or ignorance on the part of the men themselves.

It is a matter worthy of the serious consideration of the managers of mines that in this district alone 36 lives were lost last year by "falls of the roof and sides of workings."

Shaft
ccidents.

Shaft accidents this year are 13. Two men were killed in attempting to get into the carriage whilst it was in motion; four fell out of the carriage in ascending or descending; one man (*mason's labourer*) fell into the shaft whilst attempting to walk a narrow plank; he was carrying lime mortar and had been cautioned several times he was incurring unnecessary danger, but inasmuch as it saved him a little trouble he persisted in his own course. One man was killed by the end of a broken rope striking him whilst standing on the pit bank not far from the mouth of the shaft; and three were killed by falling from the surface into the shaft.

Of these deaths it will be seen that many of them arose from no fault of the management, or the men themselves, they were pure accidents; but some of them "*getting into the carriage whilst it was in motion*," "*crossing over the top of the shaft*," were reckless acts of the unfortunate sufferers, and had the owners provided proper self-acting fencing to protect the shafts the lives of three persons would have been saved.

Sinking shafts.

Some accidents have occurred in sinking shafts; this is always an occupation attended with more danger than ordinary colliery work, and demands the employment of skilful and experienced "hands." In consequence of the continued great demand for the coals of the district many new mines are being opened, fresh shafts sinking, many of them are of great depth, and present difficulties which should be taken into consideration in estimating any comparison of lives lost in shafts.

Crushed by trams or tubs.

Thirteen lives were lost by being "*crushed against the sides*," or run over on engine and self-acting incline planes; one boy was under 14, and eight of them under 13 years of age; they were for the most part employed as door-boys or horse-drivers. One, an old man, 76 years of age, being employed in sweeping or keeping clean an incline, it was supposed he did not hear the train coming down the incline in time to get out of its way to a place of safety; he had worked underground all his life, and for many years occupied a position of trust, but failing health and infirmity of age induced him to relinquish his appointment and seek less laborious work.

Suffocation by gases.

A sinker lost his life in a shaft near Sheffield; it appeared in the interval of time the sinkers were away at their dinners the shaft bottom filled with gas (*black damp*), and on being lowered down to resume work suffocation ensued from inhaling the noxious gas; there had been a derangement in the ventilation for some days previous, and evidently there was not a sufficient quantity of air in the shaft on that and the few preceding days; the presence of gas was unexpected, or means should have been taken to render the place safe.

Miscellaneous.

An explosion of gun cotton killed a sinker whilst he was in the act of ramming the charge at a colliery in Leicestershire.

At Annesley new shaft the force of water through the wedging of the "*tubbing*" knocked deceased off the scaffold, and he fell into some water below and was drowned.

On the surface eight persons were killed—three run over by railway waggons at colliery sidings, one run over by pit train; two by machinery, and two by the explosion of an engine-boiler.

This explosion took place on the morning of the 23rd of November at a small colliery belonging to Mr. Rangeley, at Unstone, near Sheffield; the boiler was comparatively a new one, having been in use about two years, it was fitted with the usual water steam gauges and safety valve. On examination I found the plates over the fire and along the side had become so exceedingly thin (*in places not more than* $\frac{1}{16}$*th of an inch*), as to render it unsafe. It was known that the action of the water used had a most injurious effect on the iron plates, and the condition of the boiler was reported by the engine-man to the manager in the month of October, and directions were given to make some temporary repairs; this was done by removing the rivets and inserting pins, and screwing the plates together, which had the effect of stopping for a short time the leakage of water. It did not appear from the evidence to be the duty of any experienced person to make regular inspections and examinations of the boilers, or these defective plates would have been seen and its dangerous condition made known.

Boiler explosions in this district are, I am happy to say, of rare occurrence, for the most part they are well made, fitted with the best known gauges, and well looked after; each boiler has one or more safety valve, a mercurial or other steam gauge, and a float or glass water gauge. If these appliances are properly attended to, the pressure of steam and the exact height of water can always be correctly ascertained, and no such mistake as that described by the witnesses at the recent inquest held by the coroner for the county of Monmouth could be made. "It was a boisterous day, and the engine-man tried the water-" cocks in the usual way; he imagined the sound indicated a sufficient supply of water, " unfortunately he was deceived, for it turned out to be the emission of steam," and soon after a terrible explosion took place and several lives were lost.

Workmen's complaints.

Complaints have been received during the year from several workpeople of the defective state of machinery, inadequate ventilation, and other non-observances of the Act of Parliament. I have always taken the earliest opportunity of thoroughly investigating these matters, and have occasionally found just cause of complaint; but on proper representations being made to the owners or managers, they have at once adopted such suggestions as I have thought necessary to make, and the defects remedied with promptitude.

Bratticed shafts.

In two instances only have I known of collieries to be at work with only one shaft, they were very limited in extent, and but few persons were employed. I pointed out to the owner of the mine in Warwickshire that it was contrary to the spirit and intention of the law to provide only one means of ingress and egress, he at once suspended all operations until such time as proper communication could be made from some convenient shaft or outlet. And in the other case in Derbyshire means are now being employed to get direct communication from the workings to another shaft on the property, and until such time as this airway can be made not more than twenty (20) persons are allowed to be in the mine at one and the same time.

Employment of boys.

On my visits of inspection I constantly inquire what rules they adopt as to the employment of boys, and I am informed almost without exception that no boy is intentionally allowed to work underground until he has attained the age of 12 years, it is possible in isolated cases a younger lad may, through misrepresentation, get into the mine, but no such case has come under my immediate observation.

Prosecutions

I have felt it to be my duty, after reporting the facts to you, to institute proceedings against the following persons for violations of the Act of Parliament:

Mr. Stephen Sayers, owner Tapton Colliery.
Messrs. Joseph and George Wells, owners of Renishaw and other collieries.

Penalties and costs were imposed.

Ironstone mines.

Five accidents to ironstone miners have been reported this year, and they were attended with the loss of six lives; two from falls of the roof, one the breakage of a rope, one falling into shaft from the surface, and two from breakage and derangement of winding machinery. I do not think much confidence should be given to this return of accidents and deaths in ironstone mines, as it is not well understood, and is somewhat difficult to define, what is really meant by an "ironstone mine of the coal measures worked in connexion with coal, or with any disused or exhausted coal mines." Again I repeat it would be much more satisfactory if all ironstone mines of the coal measures were included in the provisions of the Mines Inspection Act.

I would particularly draw your attention to a case of some importance which I had to deal with this year. On the 15th of August two persons were killed at the ironstone mines of the Messrs. Appleby, at Glasshouse Common, which is near to the town of Chesterfield; on receiving notice of the accident I made an inspection of the works and attended the inquest. The winding arrangements are most complicated, and it will be necessary to explain them somewhat in detail to understand the nature of the accident. A steam engine is placed in the midst of a great number of shafts, and it gives motion to a horizontal drum, and by using a pair of bevel wheels it also works at the same time a vertical drum. On these drums are seventeen (17) ropes, and they lower and raise persons and materials from sixteen (16) separate shafts and an incline plane, which are of unequal distances from the drums, ranging from 40 to 350 yards, and the depths varying from 40 to 70 yards. It appeared on the morning in question 10 ropes worked from off the vertical drum, and seven on the horizontal one.

At the time of the accident five persons were descending two different shafts on empty carriages, against loaded carriages in the other shafts, and when within a few feet of the top the full cages suddenly reversed, fell to the bottom, drawing the men and carriages, up the other shafts and over the pulley wheels; two poor fellows were killed, and three wonderfully escaped by jumping out at the bottom. On examination of the vertical drum, the shaft was found to be broken off in its bearing, and having no break on, it no longer remained under control of the engine-man. The shaft appeared to be of good material and workmanship, and I believe the fracture was caused by the unequal distribution of the weight and sudden jerks to the machinery. This extraordinary arrangement of winding machinery is in my opinion unsafe to those employed in the mine; it therefore became my duty to serve the owners with a notice to that effect; they, on consideration, and I am told, by the advice of their solicitor, contended that the mines were such as did not come within the meaning of the Mines Inspection Act, and consequently the inspector had no jurisdiction. I, however, instituted proceedings against the owners before the magistrates, and proved that many years since the black shale coal had been worked, and the present owners had reopened the old shafts for the purpose of getting the ironstone, which lies a little above the old workings of the said coal. The drainage of the ironstone workings is conducted through the original coal level, and occasionally, in consequence of the close proximity of the coal and ironstone workings, falls occur, and thereby a direct connexion is made with a "disused or exhausted coal mine."

And further, it was also proved that even now a thin seam of coal (*about five inches*) is being worked together with the ironstone mine. This coal is probably of no commercial value, but as the Act of Parliament was passed for the protection of life, and this, like all other mines, is attended with danger, the commercial question does not arise.

The magistrates decided that the mines were worked in connexion with an exhausted coal mine, and a penalty was imposed for that the owner had not established special rules. A case was asked for to be submitted to argument in the Court of Queen's Bench, which was granted, but on reflection it was abandoned and the penalty paid.

In no other district in England is such a system practised—a man having to work an engine winding persons from 16 different shafts, at the distances and depths described; and, further, they are so arranged that only the tops of a few of them can be seen from the engine-house. This is not, however, an exceptional case, for others of a similar description are still at work in the county of Derby.

No. 24 *accident.—Explosion of Gas, Clay Cross Colliery.*

This explosion took place on the morning of the 3rd of May, in the workings of the black shale coal, of the Number 4 pit. The colliery is the property of the Clay Cross Iron and Coal Company, and probably one of the most extensive mines in the Midland district.

On the morning referred to a terrible noise was heard, the lights in the engine-house, which is some distance from the mouth of the shaft, were suddenly put out, one of the winding ropes snapped off at the drum, and the carriage and rope falling down the shaft did some damage to the conductors and fittings. It was soon discovered that an explosion of gas had taken place in the workings of the mine, and eight poor men's bodies were found and brought to bank.

An examination of the colliery was made, and it was ascertained the violence of the explosion was confined to the south side of the workings, down the engine plane, a short distance along the main level, and up the downcast shafts.

From the position in which the bodies were found, the direction the doors were blown, and other indications, it was clear the explosion took place in a stall on the southern side of the engine plane, considerably to the "deep" of the shafts. The pit was in full work the previous day, and the man who worked in this particular stall left it at six o'clock apparently in a safe condition, and free from gas. It was suggested that an unusual quantity of gas had suddenly been discharged from a fissure in the floor and fouled the workings for some distance. I examined this stall carefully soon after the explosion, and certainly did see a large open fissure of considerable depth, extending itself some distance along the stall parallel with the face of coal. It was proved in evidence that nothing of this crack was to be seen the previous evening. I believe that gas did come off at this point, and the ordinary ventilation was insufficient to dilute it to the safety point. Naked lights were used throughout the mine, and probably at the candle of one of the unfortunate sufferers the gas fired.

The black shale coal has for many years been extensively worked along the outcrop of the Derbyshire coal field, this is the first instance on record of any sudden and large quantity of gas being given off. An ordinary amount of ventilation properly directed along the "long work" faces and through the gate roads has generally been sufficient for the safe working of the mines. This mine is, however, considerably to the "deep" of any hitherto worked, and this, in all probability, may account for the sudden discharge and pressure of gas. In future it will be necessary to largely increase the quantity of air and gradually introduce the use of socked safety lamps in the fiery mines of the midland counties.

No. 68.—*Explosion of Gas, Renishaw Colliery.*

One man was killed by this explosion. On inspection of the mine I found that although there was a fair quantity of air passing along the working faces, the gate roads were left wholly unventilated, and from the evidence given at the inquest gas was known to lodge along the roof, and notwithstanding this, men were allowed to work near it, and even use blasting powder. Three separate explosions of gas have taken place in this colliery within twelve months. I have frequently pointed out the necessity of an alteration in the system of ventilation, and the utter want of discipline underground.

The early part of the year I sent a circular letter to each colliery owner or manager, asking for information with respect to the number of persons employed and the coal work during the year 1865. I have to express my thanks for the kind attention given to my request, and with but one or two exceptions the actual quantities of coal raised have been given.

I find that in the counties of Derby, Nottingham, Leicester, and Warwick, there are 205 collieries, working nearly 7,600,000 tons of coal, and giving employment to 20,000 people.

I have, &c.
THOMAS EVANS,
Inspector of Mines.

The Right Hon. Sir George Grey, Bart., G.C.B., &c., &c.
Her Majesty's Principal Secretary of State, Whitehall.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS of LIFE arising therefrom, in the MIDLAND DISTRICT during the Year ending 31st of December 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In shafts.	Miscellaneous.	Above ground.	Total.
1865.														
Jan. 7	1	Clay Cross -	Chesterfield -	William Jackson and Co. -	John Roach -	Miner -	30	Fall of stone - - - -	–	1	–	–	–	–
„ 14	2	Greasley Wood -	Burton-on-Trent	Limited Co. - - -	John Marriott -	Ditto -	22	Fall of coal - - - -	–	1	–	–	–	–
„ 17	3	Tame Valley -	Tamworth -	Knock and Co. - -	Joseph Bird -	Ditto -	13	Run over on incline - - -	–	–	–	1	–	–
„ 31	4	Birley Vale -	Sheffield - -	Sheffield Coal Co. - -	George Archer -	Banksman -	40	Fell down shaft - - -	–	–	1	–	–	–
Feb. 1	5	Denby - -	Derby - -	Dawes and Co. - -	James Brown -	Collier -	20	Fall of coal - - - -	–	1	–	–	–	–
„ 7	6	Kettlebrook -	Tamworth -	Executors of Dumalo -	William Shilton -	Boy -	13	Run over on incline - - -	–	–	–	1	–	–
„ 14	7	Snibstone - -	Leicester - -	G. Stephenson and Co. -	James Turner -	Collier -	50	Fall of coal - - - -	–	1	–	–	–	–
„ 14	8	Nailstone - -	Leicester - -	Limited Co. - - -	John Skinner -	Sinker -	—	Fell out of tub in shaft - -	–	–	1	–	–	–
„ 17	9	New Hollingwood	Chesterfield -	Stavely Coal Co. Limited-	James Anderson -	Collier -	—	Fall of coal from shot - -	–	1	–	–	–	–
„ 23	10	Bretby - -	Burton-on-Trent	Earl of Chesterfield -	Samuel Street -	Ditto -	45	Mortification of finger - -	–	1	–	–	–	–
„ 23	11	Ripley - -	Derby -	Butterley Iron Co. -	William Watson -	Ditto -	—	Fall of roof - - - -	–	1	–	–	–	–
„ 24	12	Nesfield - -	Chesterfield -	Limited Liability - -	John Handley -	Ditto -	—	Fall of coal - - - -	–	1	–	–	–	–
Mar. 4	13	Cinderhill - -	Nottingham -	Thomas North - -	John Atkinson -	Ditto -	18	Fall of bind (worked as a collier about four months).	–	1	–	–	–	–
„ 17	14	Selston - -	Alfreton - -	James Oakes and Co. -	John Battley -	Ditto -	48	Rope broke on incline (run over)	–	–	–	1	–	–
„ 22	15	Clay Cross -	Chesterfield -	William Jackson, M.P., and Co.	Thomas Spencer -	Ditto -	19	Fall of roof - - - -	–	1	–	–	–	–
Apr. 1	16	Springwell - -	Chesterfield -	Stavely Iron & Coal Co. Lim.	James White -	Ditto -	—	Ditto - - - - -	–	1	–	–	–	–
„ 1	17	New Hollingwood	Chesterfield -	Ditto - - -	John Carter -	Ditto -	32	Ditto - - - - -	–	1	–	–	–	–
„ 7	18	Stanton - -	Burton-on-Trent	J. & N. Nadin - -	Joseph Clifford -	Ditto -	33	Getting into carriage whilst in motion	–	–	1	–	–	–
„ 19	19	Bridgehouse -	Chesterfield -	Sayer - - - -	William Wilkinson	Boy -	13	Tub fell down shaft about 12 yards deep, on fencing.	–	–	1	–	–	–
„ 27	20	Oakesthorpe -	Alfreton - -	Oakesthorpe Iron Co. -	Charles Barrows -	Ditto -	13	Fall of bind - - - -	–	1	–	–	–	–
„ 27	21	Kettlebrook -	Tamworth- -	Exors. of Dumalo - -	Thomas Thompson	Door boy -	13	Run over - - - -	–	–	–	1	–	–
„ 8	22	Brinsley - -	Eastwood - -	Barber, Walker, and Co. -	William Hill -	Boy -	13	Fall of bind - - - -	–	1	–	–	–	–
May 2	23	Birley Vale -	Sheffield - -	Sheffield Coal Co. -	Thos. Godfrey -	Sinker -	34	Suffocated in sinking shaft - -	–	–	–	1	–	–
„ 3	24	Clay Cross - -	Chesterfield -	William Jackson, M.P. -	Fireman and seven colliers.	—	—	Explosion of gas - - -	8	–	–	–	–	–
„ 4	25	Glascote - -	Tamworth -	Glascote Coal Co. - -	Frank Parker -	Collier -	14	Fell out of cage - - -	–	–	–	–	–	–
„ 6	26	Swannington -	Ashby-de-la-Zouch	W. Worsinck - -	Fred. Heywood -	Banksman -	40	Fell down shaft - - -	–	–	1	–	–	–
„ 7	27	Springwell -	Chesterfield -	Stavely Coal Co. - -	Timothy Coffee -	Collier -	—	Rope broke and killed this person on the bank.	–	–	1	–	–	–
„ 11	28	Snibstone - -	Leicester - -	G. Stephenson and Co. -	Robert Hone -	Ditto -	50	Fall of roof - - - -	–	1	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865.														
May 20	29	Riddings	Alfreton	James Oakes and Co.	Herbert Bradshaw	Collier	15	Fall of roof	—	1	—	—	—	—
„ 24	30	Portland	Ditto	Butterley Iron & Coal Co.	William Bowman	Ditto	16	Ditto	—	1	—	—	—	—
June 15	31	Glascote	Tamworth	Glascote Coal Co.	Thomas Alludge	Ditto	42	Ditto	—	1	—	—	—	—
„ 17	32	Ditto	Ditto	Ditto	Charles Cooley	Ditto	28	Ditto	—	1	—	—	—	—
„ 19	33	Nesfield	Chesterfield	Midland Silkstone Co.	Robert Owen	Ditto	—	Ditto	—	1	—	—	—	—
„ 24	34	Kilburne	Belper	Rae	John Lauder	Boy	13	Run over	—	—	—	1	—	—
„ 26	35	Victoria	Coventry	Oliver and Co.	James Nixon	Engineman	18	Fell into machinery	—	—	—	—	1	—
„ 30	36	Kettlebrook	Tamworth	Exors. T. Dumalo	Thomas Williamson	Boy	13	Breaking of an incline rope	—	—	—	1	—	—
„ 30	37	Shipley	Ilkeston	M. Mundy	George Lane	Collier	—	Fall of coal	—	1	—	—	—	—
July 3	38	Whitwick	Leicester	J. Whetstone	Richard Hewitt	Ditto	35	Fall of roof	—	1	—	—	—	—
„ 3	39	Shipley	Ilkeston	M. Mundy	George Weston	Ditto	38	Disease of knee joint from fall of roof.	—	1	—	—	—	—
„ 8	40	Old Tapton	Chesterfield	John Brailsford	Charles Brailsford	Son of owner	16	Fell down shaft	—	—	1	—	—	—
„ 8	41	Blackwell	Alfreton	Edmund Chambers	William Pendleton	Sinker	42	Fell down shaft whilst coming up	—	—	1	—	—	—
„ 11	42	Cadley Hill	Burton	Hall and Boardman	John Smith	Collier	19	Fell off carriage in shaft	—	—	1	—	—	—
„ 20	43	Cinder Hill	Nottingham	Thomas North	Joseph Parrott	Haulier	13	Run over	—	—	—	1	—	—
„ 21	44	Snivils	Ashby-de-la-Zouch	Walker and Worswick	Thomas Green	Banksman	15	Run over by railway waggon	—	—	—	—	1	—
„ 26	45	Lings	Chesterfield	Wingerworth Coal Co.	Charles Vardy	Collier	38	Fall of roof	—	1	—	—	—	—
„ 26	46	Speedwell	Ditto	Stavely Coal Co.	William Harrison	Ditto	36	Fall of coal	—	1	—	—	—	—
„ 27	47	Clay Cross	Ditto	W. Jackson, M.P.	George Allen	Ditto	—	Fall of bind-roof	—	1	—	—	—	—
„ 30	48	West Stavely	Ditto	West Stavely Coal Co.	Samuel Sandbrook	Ditto	—	Fall of coal	—	1	—	—	—	—
Aug. 4	49	Swadlincote	Burton	Hall and Boardman	George Hodgkinso	Sinker	41	Wheels of drum broke, killed in shaft.	—	—	—	—	1	—
„ 17	50	Clay Cross	Chesterfield	William Jackson, M.P.	John Scott	Door boy	13	Crushed by trams	—	—	—	1	—	—
„ 17	51	Ditto	Ditto	Ditto	Robert Briggs	Collier	32	Fall of roof. Had been cautioned; the place required timbering.	—	1	—	—	—	—
„ 17	52	Ditto	Ditto	Ditto	William Poynton	Ditto	45	Run over on incline whilst looking for his cap.	—	—	—	1	—	—
„ 26	53	Swannington	Ashby-de-la-Zouch	W. Worswick	James Smith	Sinker	46	Explosion of gun cotton whilst ramming.	—	—	—	1	—	—
„ 31	54	Annesley	Mansfield	Ditto	James Wright	Ditto	40	Drowned in shaft; knocked off scaffold by the pressure of water from tubbing.	—	—	—	1	—	—
„ 31	55	Swanwick	Alfreton	Morewood	William Stones	Collier	—	Fall of coal	—	1	—	—	—	—

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865.														
Sept. 9	56	Bretby -	Burton -	Earl of Chesterfield -	John Tomlinson -	Horse driver	13	Crushed by tram - - -	–	–	–	1	–	–
„ 9	57	Tanyard Pit -	Alfreton - -	Butterley Coal Co. -	John Somers -	Collier -	36	Fall of roof - - - -	–	1	–	–	–	–
Sept. 30	58	Swadlincote -	Burton - -	Hall and Boardman -	George Greaves -	Collier -	45	Fall of roof - - - -	–	1	–	–	–	–
„ 18	59	Golden Valley -	Ilkeston - -	Butterley Iron Co. - -	John Neale -	Ditto -	25	Ditto - - - - -	–	1	–	–	–	–
Oct. 5	60	Remshaw -	Chesterfield -	J. and G. Wells - -	George Stanton -	Screenman	—	Run over railway waggon - -	–	–	–	–	1	–
„ 5	61	New Brampton -	Ditto - -	Householders' Mutual Colliery Co.	Herbert Randell -	Boy -	13	Fell down shaft in pushing a tub on to the carriage.	–	–	1	–	–	–
„ 16	62	Wingerworth -	Ditto - -	Wingerworth Coal Co. -	Thomas Heirns -	Horse driver	13	Run over on pit bank - -	–	–	–	–	1	–
„ 19	63	Denby - -	Derby - -	W. D. Lowe - - -	Frederick Agden -	Labourer -	23	Carrying mortar across shaft, slipped and fell into shaft.	–	–	–	–	–	–
„ 21	64	Springwell -	Chesterfield -	Stavely Coal Co. - -	Michael Kane -	Collier -	—	Run over by railway waggons -	–	–	–	–	1	–
„ 27	65	Clay Cross -	Ditto - -	William Jackson, M.P. -	William Walters -	Ditto -	76	Run over on incline - - -	–	–	–	1	–	–
Nov. 1	66	Hawkesbury -	Bidworth -	Hawkesbury Coal Co. -	Samuel Harvey -	Boy -	14	Fell down shaft in attempting to get into carriage whilst in motion.	–	–	1	–	–	–
„ 3	67	Cinder Hill -	Nottingham -	Thomas North - -	Robert Davis -	Collier -	14	Fall of bind - - - -	–	1	–	–	–	–
„ 3	68	Seymour -	Chesterfield -	Stavley Coal Co. - -	Richard Madley -	Ditto -	14	Crushed by trams at pit bottom -	–	–	–	1	–	–
„ 16	69	Remshaw Park -	Ditto - -	Joseph and G. Wells -	Joseph Oldfield -	Ditto -	24	Explosion of gas; insufficient ventilation in gate roads.	1	–	–	–	–	–
„ 24	70	Unston - -	Sheffield - -	Rangeley - - -	G. Harrington -	Engineman	28	Explosion of boiler - - -	–	–	–	–	2	–
		„	„	„	Eliza Hague -	- -	5	Explosion of boiler; was not employed at the mine.	–	–	–	–	–	–
Dec. 14	71	Bretby - -	Burton - -	Earl of Chesterfield -	Henry Thornbury -	Collier -	—	Fall of stone - - - -	–	1	–	–	–	–
„ 21	72	Newcastle - -	Nottingham -	Thomas North - -	Thomas Wingfield	Ditto -	—	Fall of roof; died in the hospital, Nottingham.	–	1	–	–	–	–
„ 21	73	Slineoaks - -	Worksop - -	Slineoaks Co. - -	William Jones -	Ditto -	—	Fall of roof - - - -	–	1	–	–	–	–
„ 25	74	Highfield - -	Alfreton - -	Oakesthorpe Coal Co. -	William Kirk -	Ditto -	—	Ditto - - - - -	–	1	–	–	–	–
								Total - - -						

LIST of the FATAL IRONSTONE ACCIDENTS, and LOSS of LIFE arising therefrom, in the MIDLAND DISTRICT during the Year ending 31st of December 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
Apr. 12	75	Riddings	Alfreton	James Oakes and Co.	William Hickson	Miner		Fall of roof	–	1				
Aug. 8	76	Glasshouse Common	Chesterfield	Appleby and Co.	- - -	Miners		Breakage of winding machinery	–	–	2			
„ 31	77	Salter Wood	Derby	W. H. & Geo. Dawes	Joseph Wood	Miner	40	Rope broke	–	–	1			
Oct. 27	78	Outcrop Mine	Chesterfield	Howarth	William Howarth	Boy	14	Fell into shaft 24 yards deep	–	–	1			
„ 21	79	Hopewell	Ditto	Stavely Coal Co.	- - -	Boy	14	Fall of roof	–	1				
									–	2	4	–	–	6

Mr. Wynne's Report.

REPORT on the INSPECTION of MINES for the DISTRICT comprising NORTH STAFFORDSHIRE, CHESHIRE, and SHROPSHIRE, for the Year ending 31st December 1865.

SIR, Stone, February 27, 1866.

THE Report I now have the honour of transmitting to you will bear a favourable comparison with any previous ones, when it is borne in mind that the get of coal in North Staffordshire has nearly doubled in 10 years, and the number of accidents is but slightly increased. There seems good cause for congratulating the owners and managers of mines on their care and diligence, for to this and this only can such a happy result be attributed. In this portion of the district the accidents have been 29, causing 36 deaths, 10 of which lives were lost at two collieries, by no means the largest in the district. In Cheshire there has been an increase to seven accidents, causing seven deaths, and in Shropshire a decrease to nine accidents and nine deaths.

Explosions of Fire-damp

Have not been so numerous nor so fatal in 1865 as in 1864; and but for the gross mismanagement at Clough Hall and Brookhouse Collieries, would have been reduced to that small number which casualties alone produce, and which I contend is in the power of man to bring them to, by rigidly carrying out in letter and in spirit the first and second general rules. On the 1st March an explosion took place in the Bull Hurst seam at the Clough Hall Colliery whereby five lives were sacrificed. It appeared that the man who had charge of the pit found gas in the working place, both in the morning and a few hours before the accident, to the fearful extent of "a foot or so" from the roof, yet allowed the men to continue working, and even to fire a shot, which it was said caused the explosion. Now this was a place in which men ought not to have been allowed to work, and to fire a shot there was perfect madness. Mr. Ronaldson, the manager, in his evidence says, "I was down the pit a week or so before. I did not examine the air. "I did not examine for gas. There was no air in the place but brattice air. The gas "had not been reported to me. It is not safe to leave it so near men's heads. I laid out "these workings. It is a fiery seam. There is no furnace or other means to produce "ventilation. We had a man burnt in the main airway some time before."

Upon this I caused Mr. Ronaldson to be summoned for a breach of the first general rule, but the magistrates in their wisdom decided to dismiss the case, because *it would not have fired but for the shot, which was against orders.* This would have been carried to a higher tribunal but for an error in giving the notice, which is much to be regretted, as the offence was clearly in allowing the place to be foul. This decision bore its natural fruit, for on the 7th September the same man (Birks) found some gas in a heading near the same place and ordered a man to go in and brush it out with his waistcoat; in doing so the flame was driven through the gauze, it fired the gas, and killed the brusher. In this case a conviction was obtained as there was no powder to lay the blame upon, and no neighbouring managers came forward to hoodwink the magistrates and whitewash the management.

On the 29th November the colliery engineer at the Brookhouse Colliery assisted by two men was fixing some wire guides in a pit, and when he had finished, all three went down to see how they worked. On reaching the bottom an explosion took place, one man being blown out of the bowk before it was drawn up. Wonderful to relate, the bowk with two men in it was allowed to remain about two hours over the pit in all the afterdamp without any search being made for them. Of course when they were found life was extinct. Had they been searched for and found immediately, there is every reason to believe their lives would have been saved, as they could not have been more than three minutes in the pit. This accident is the more inexcusable, as five lives were lost on the 2nd March 1864 in the same pit, in the same place, and by the same means. Surely it is not saying too much in asserting that good management would have prevented this. The other three explosions call for no particular remark, as casualties always will occur.

Falls of Roof and Coal

Are in the main the most preventible of all accidents, a proof of which is easily given, for where the roof is what is termed a bad one no lives are lost. Take, for instance, the Winghay or Knowls seams, which are rather extensively worked throughout North Staffordshire. We rarely hear of an accident in those seams, because the roof is so tender that for the interest of the owner a large quantity of timber is absolutely necessary, or the roads would fall in. Now in this seam to be forewarned is to be forearmed, therefore why should not every place in a pit be made as secure as timber and pinnings can make them?

Out of 22 accidents 16 were preventible, and if every breach of the rules was taken notice of by persons in authority at each mine, *care* would become the rule, and *negligence* the exception, and that fatal mistake of colliers, considering themselves safe until they see actual danger, would not be tolerated as it is at present. My constant recommendation is to timber every place that is more than 6 feet wide, whether it wants it or not.

In Shafts

The number of accidents was eight, and the lives lost nine, rather less than the previous year, but far beyond what it ought to be; for instance, it is not very creditable to the system that in only one other district (South Staffordshire) has there been any loss of life from overwinding; it is on the system and not on the men that the blame should be laid, but better things may now be expected, as guides and closed pit tops are gradually superseding the old rude mode so long in use.

Miscellaneous causes

Have been productive of seven accidents and seven deaths, none of which call for particular notice; but the increase in the number of accidents on inclines calls for the utmost vigilance on the part of every person in authority, from the manager downwards, or this will become one of the most fertile sources of danger to which young men and boys can be exposed. The speed, too, at which they travel on the level roads should be regulated, or the crushing between tubs will be still more fatal.

Above ground.

I have again to congratulate the enginemen of my district for the ninth time that another year has been free from any of those calamities which the bursting of boilers produce.

In my report for 1864 the fact was recorded that out of 54 deaths nine took place at Botteslow and Brookhouse Collieries, and I am sorry to say that out of 52 during the past year three men have lost their lives at these collieries.

Ironstone Mines

Are becoming of immense importance in North Staffordshire, from which a supply is drawn not only for her own blast furnaces, but for a large portion of what is smelted in the south of the county. It has long been the main source from whence the iron masters drew hundreds of thousands of tons to keep the furnaces of the South in blast, but now the get of ironstone has arrived at the large amount of 2,000,000 of tons of raw stone; therefore it need not surprise anyone that the deaths in this district have been 17, for some of the seams vary in thickness up to eight feet, having a thin seam of coal to hole in.

Nearly all the ironstone is got by charter, and the natural tendency of the system is cheapness and not safety. Miners are made to "hole" or cut away the coal from under the stone to the fearful extent of six feet; this being the case no sprags that the men will put under are equal to the superincumbent weight when the mass of stone becomes detached from the face through one of those very common "things," a straight facing from floor to roof for many yards in one direction. Another prolific source of danger is the reprehensible practice of driving the jigs and levels double the width they are intended to be driven, thus leaving the roof stone overhanging, the danger from this increasing as the "dip" or inclination of the mine increases, varying as it does from 4 inches to 8 inches in the yard. This may soon be put a stop to if the manager will act with firmness, and not pay for that as "stret," or dead work, which has degenerated into a drift or stall. The temptation is no doubt very great to follow up one of those smooth faces named above, rather than cut the stone and let down half the quantity. Perhaps the best way of keeping the width within proper bounds would be to insist on all wide places being timbered, and then the masters will find it too expensive to provide timbers, after having paid for narrow work which needs but little propping.

Shropshire has long carried out the best known system of propping, namely, running a continuous line of timber along the face about half way between the floor and roof, and fixing " at frequent intervals " diagonal supports from the straight timbers to the floor and roof respectively.

I am sorry to say this plan is gradually giving way before the influx of strangers, and the natural tendency of the butty system to prefer present profits to that safety from dangers which, for the time, are quite unforeseen and unappreciated, until the loss of life or limb of a fellow creature rouses them to a sense of real danger.

It is to be regretted that the whole of the ironstone mines were not included in the 23 & 24 Vict. c. 151, so that the exact number of lives lost may be ascertained. Under present circumstances the greatest difference of opinion prevails as to what is and what is not an ironstone mine within the meaning of the Inspection Act. In my district all or nearly all the accidents are reported, whilst in others only a fraction of them; therefore it must not be inferred from the number of lives lost in the ironstone mines of Staffordshire and Shropshire that the same care and attention is not bestowed on them as there is on the iron-producing districts of the kingdom.

I have, &c.

THOMAS WYNNE.

The Right Hon. Sir George Grey, Bart., G.C.B.,
Her Majesty's Principal Secretary of State,
Whitehall, London.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS OF LIFE arising therefrom, in the NORTH STAFFORD, SHROPSHIRE, and CHESHIRE DISTRICT, during the Year ending 31st December 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Totals.
1865. Jan. 5	1	Poynton	Stockport	Lord Vernon	Samuel Lloyd	Driver	12	Fall of roof	—	1	—	—	—	
,, 11	2	Throstle Nest	Macclesfield	J. Needham	John Veare	Collier	—	Ditto	—	1	—	—	—	
,, 19	3	Dunkirk	Dukinfield	Dunkirk Coal Company	R. Hilton	Waggoner	15	Ditto	—	1	—	—	—	
,, 29	4	Shelton	Stoke	Earl Granville	E. Williams	Engineman	52	Fell into flywheel race	—	—	—	—	1	4
Feb. 8	5	Foley	Longton	W. H. Sparrow and Son	A. Colclough	Banksman	25	Fell down the shaft	—	—	1	—	—	
,, 9	6	Dunkirk	Dukinfield	Dunkirk Coal Company	H. Lomas	Hooker-on	—	Whilst filling a naphtha lamp he set fire to his clothes.	—	—	—	1	—	
,, 14	7	Shelton	Stoke	Earl Granville	H. Jones	Doorkeeper	12	Fell out of the cage from the top of the shaft.	—	—	1	—	—	
,, 25	8	Stonetrough	Tunstall	Williamson, Brothers	H. Hancock	Collier	38	Fall of coal	—	1	—	—	—	4
Mar. 1	9	Clough Hall	Newcastle	Kinnersley and Company	E. Birks and four others.	-	—	Explosion of fire-damp	5	—	—	—	—	
,, 17	10	Old Park	Wellington	Old Park Company	J. Guy	Driver	15	Crushed by an empty tram	—	—	—	1	—	
,, 19	11	Madeley Wood	Ironbridge	Jno. Anstice and Co.	Chas. Jones	Collier	33	Fall of coal	—	1	—	—	—	7
Apr. 6	12	Dawley	Ditto	Coalbrookdale Company	W. German	Ditto	—	Drawn over the pulley and fell down the shaft.	—	—	—	1	—	
,, 14	13	Biddulph Valley	Congleton	Robert Heath	S. Lancaster	Ditto	22	Fall of roof	—	1	—	—	—	
,, 16	14	Shelton	Stoke	Earl Granville	George Orton	Ditto	55	Fall of coal	—	1	—	—	—	3
May 27	15	Madeley Wood	Ironbridge	Jno. Anstice and Co.	J. Botwood	Ditto	55	Explosion of fire-damp	1	—	—	—	—	
,, 31	16	Hayswood	Newcastle	Burgess and Proctor	Geo. Wright	Ditto	23	Drawn up to the pulley and fell down the shaft.	—	—	1	—	—	2
June 12	17	Fenton Park	Fenton	Fenton Park Company	Thos. Dalton	Metalman	40	Fall of rock whilst centreing the engine house.	—	1	—	—	—	
,, 21	18	Bradley Green	Congleton	W. Bradbury	W. Holland	Collier	34	Fall of coal	—	1	—	—	—	2
July 1	19	Pinnox	Tunstall	H. H. Williamson	Two men	Enginemen	—	Scaffold gave way whilst changing a bucket.	—	—	2	—	—	
,, 10	20	Old Park	Wellington	Old Park Company	W. Bailey	Reeve	40	Fall of roof	—	1	—	—	—	
,, 21	21	Biddulph Valley	Congleton	Robert Heath	H. Booth	Breaksman	17	Break chain carried him on to the drum.	—	—	—	1	—	
,, 26	22	Wombridge	Wellington	John Bennett	Thos. Holland	Miner	—	New handturn rope broke whilst examining the shaft.	—	—	1	—	—	5
Aug. 2	23	Clough Hall	Newcastle	Kinnersley and Company	C. Stevenson	Collier	24	Fall of roof	—	1	—	—	—	
,, ,,	24	Lilleshall	Wellington	Lilleshall Company	R. Jones	Ditto	—	Explosion of fire-damp	1	—	—	—	—	
,, 3	25	Cinderhill	Longton	Cinderhill Company	G. Dennis	A boy	15	Struck by the arm of a gin	—	—	—	—	1	
,, 6	26	Bucknall	Hanley	Gerrard and Hawkes	E. Hulme	Collier	32	Fall of coal	—	1	—	—	—	
,, 16	27	Apedale	Newcastle	J. E. Heathcote	W. Dale	Ditto	46	Fall of roof	—	1	—	—	—	

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost. Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Totals.
1865.														
Aug. 21	28	Bank Top -	Bursiem - -	James Stott - -	A man -	Collier -	22	Fall of coal - - - - -	–	1	–	–	–	6
Sept. 4	29	Silverdale -	Newcastle -	Silverdale Company -	R. Pollitt -	Engineman	26	Crushed whilst oiling machinery -	–	–	–	–	1	
„ 7	30	Clough Hall -	Ditto - -	Kinnersley & Company -	P. Clarke - -	Collier -	34	Explosion of fire-damp - - -	1	–	–	–	–	
„ 25	31	Goldenhill -	Tunstall - -	Williamson, Brothers -	C. Lawton - -	Ditto -	51	Fall of coal - - - - -	–	1	–	–	–	
„ 26	32	Berry Hill -	Hanley - -	William Bowers - -	T. Cartlidge -	Ditto -	22	Fall of coal - - - - -	–	1	–	–	–	
„ „	33	Old Field -	Longton - -	W. H. Sparrow & Son -	E. Brady - -	Waggoner -	26	Crushed by waggons - - -	–	–	1	–	–	
Oct. 17	34	Dukinfield -	Stockport -	Dukinfield Company -	John Turner -	Collier -	38	Fall of roof - - - - -	–	1	–	–	–	5
„ „	35	Woodshutts -	Newcastle -	J. E. Heathcote - -	W. Baddeley -	Ditto -	50	Lowered into sump and crushed -	–	–	1	–	–	
„ 23	36	Fenton Park -	Longton - -	Jas. Stott and Co. - -	W. Boardman -	Ditto -	39	Explosion of fire-damp - - -	1	–	–	–	–	
Nov. 8	37	Biddulph Valley	Congleton -	Robert Heath - -	W. Daniels - -	Ditto -	32	Fall of coal - - - - -	–	1	–	–	–	3
„ 15	38	Poynton -	Stockport -	Lord Vernon - -	A. Horley - -	Ditto -	60	Fall of roof - - - - -	–	1	–	–	–	
„ 24	39	Lawton -	Harecastle -	Bidder and Elliott - -	T. Washington -	Ditto -	—	Fall of roof - - - - -	–	1	–	–	–	
„ 29	40	Brookhouse -	Hanley - -	Pratt and Crewe - -	W. Bates and two others.	- - -	—	Explosion of fire-damp - - -	3	–	–	–	–	
„ „	41	Madeley Wood	Ironbridge -	Anstice & Co. - -	M. Cotton - -	Collier -	35	Fall of roof - - - - -	–	1	–	–	–	
„ 30	42	Dunkirk -	Dukinfield -	Dunkirk Company - -	J. Fitton - -	Ditto -	—	Fall of roof - - - - -	–	1	–	–	–	
Dec. 2	43	Adderley Green	Longton - -	Stirrup & Pye - -	W. Stannier -	Ditto -	23	Explosion of powder - - -	–	–	–	1	–	8
„ 7	44	Madeley Court	Ironbridge -	W. O. Foster - -	W. Harrison -	Ditto -	—	Fell down shaft - - -	–	–	1	–	–	
„ 13	45	Mear Heath -	Longton - -	W. H. Sparrow and Son -	R. Bradshaw -	Ditto -	42	Dip chain broke - - - -	–	–	–	1	–	3
								Total - - - -	12	22	9	6	3	52

SUMMARY.

Cause of Death.	Jan.	Feb.	March.	April.	May	June.	July.	August.	Sept.	October.	Nov.	Dec.	Total.	Increase.	Decrease.
Explosions - -	–	–	5	–	1	–	–	1	1	1	3	–	12	–	10
Fall of Roof -	3	1	1	2	–	2	1	4	2	1	5	–	22	9	–
In Shafts - -	–	2	–	–	1	–	3	–	1	1	–	1	9	–	2
Miscellaneous -	–	1	1	1	–	–	1	–	–	–	–	2	6	1	–
Above ground -	1	–	–	–	–	–	–	1	1	–	–	–	3	–	–
	4	4	7	3	2	2	5	6	5	3	8	3	52	–	2
No. of accidents -	4	4	3	3	2	2	4	6	5	3	6	3	45	–	–

Deaths in North Staffordshire, 36; decrease, 3.
„ Shropshire, - - 9; „ 2.
„ Cheshire, - - 7; increase, 3.

NUMBER and NATURE of FATAL ACCIDENTS to PERSONS employed in and about COAL MINES and COLLIERIES in the District comprising NORTH STAFFORD, SHROPSHIRE, and CHESHIRE, during the Years 1861, 1862, 1863, 1864, and 1865.

Year.	——		Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				
		Explosions of Fire-damp.	Falls of Coal.	Falls of Stone.	Total Falls in Mines.	Overwinding.	Ropes and Chains Breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gunpowder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Underground.	Sundries Underground.	Total {Miscellaneous Underground.	By Machinery on Surface.	Boilers Bursting.	Miscellaneous on Surface.	Total on Surface.	Gross Totals.
1861	Number of Accidents - - -	3	5	9	14	–	–	3	6	2	3	2	3	19	1	–	–	–	1	2	–	–	4	1	–	–	1	41
,,	Number of Deaths - - - -	3	5	9	14	–	–	4	6	2	3	2	3	20	1	–	–	–	1	2	–	–	4	1	–	–	1	42
1862	Number of Accidents - - -	4	9	16	25	–	1	1	2	1	2	–	1	8	–	–	1	–	5	2	2	1	11	1	–	–	1	49
,,	Number of Deaths - - - -	6	9	16	25	–	12	1	2	1	2	–	1	19	–	–	3	–	5	2	2	1	13	1	–	–	1	64
1863	Number of Accidents - - -	9	4	10	14	1	1	1	3	–	2	3	–	11	–	–	–	1	3	2	–	2	8	–	–	1	1	43
,,	Number of Deaths - - - -	11	4	11	15	1	1	1	3	–	2	3	–	11	–	–	–	1	3	2	–	2	8	–	–	1	1	46
1864	Number of Accidents - - -	13	4	9	13	–	2	1	4	–	3	1	–	11	1	1	–	–	1	2	–	–	5	2	–	1	3	45
,,	Number of Deaths - - - -	22	4	9	13	–	2	1	4	–	3	1	–	11	1	1	–	–	1	2	–	–	5	2	–	1	3	54
1865	Number of Accidents - - -	6	9	13	22	2	1	1	2	–	2	–	–	8	1	–	–	–	2	2	1	1	7	2	–	–	2	45
,,	Number of Deaths - - - -	12	9	13	22	2	1	1	2	–	3	–	–	9	1	–	–	–	2	2	1	1	7	2	–	–	2	52

LIST of the FATAL IRONSTONE ACCIDENTS, and LOSS of LIFE arising therefrom, in the NORTH STAFFORD, SHROPSHIRE, and CHESHIRE DISTRICT, during the Year ending 31st December 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Totals.
1865.														
Jan. 11	1	Madeley Court	Ironbridge - -	W. O. Foster - -	J. Wooton -	Miner -	20	Fall of roof - -	–	1	–	–	–	
„ 30	2	Madeley Wood	Ditto - -	John Anstice and Co. -	B. Tipper - -	Ditto -	—	Ditto - - -	–	1	–	–	–	2
Feb. 16	3	Chesterton -	Newcastle - -	Chesterton Company -	T. Mills - -	Ditto -	19	Ditto - - -	–	1	–	–	–	
„ 27	4	Knutton -	Ditto - -	W. F. Gordon - -	Joel Walters -	Ditto -	—	Ditto - - -	–	1	–	–	–	2
Mar. 6	5	Madeley Wood	Ironbridge - -	John Anstice and Co. -	B. Boden - -	Ditto -	20	Fell into the sump - -	–	–	1	–	–	1
Apr. 27	6	Chesterton -	Newcastle - -	Silverdale Company -	R. Pepper - -	Ditto -	33	Fall of roof - - -	–	1	–	–	–	1
Aug. 6	7	Clanway -	Tunstall - -	H. Clive - -	T. Whittaker -	Ditto -	29	A load of stone upset in the drift.	–	–	–	1	–	
„ 31	8	Wombridge -	Wellington - -	Jno. Bennett - -	M. A. Taylor -	Bankwoman	—	Fell down the shaft - -	–	–	1	–	–	2
Sept. 6	9	Lilleshall -	Ditto - -	Lilleshall Company -	T. Haywood -	Woodsetter	—	Fall of roof - - -	–	1	–	–	–	
„ 7	10	Old Park -	Ditto - -	Old Park Company -	C. Evans - -	Miner -	38	Ditto - - -	–	1	–	–	–	2
Oct. 7	11	Ditto - -	Ditto - -	Ditto -	R. Evans -	Ditto -	25	Suffocated with black damp -	–	–	–	1	–	
„ 14	12	Millbank -	Newcastle - -	Harvey and Pearson -	A. Wade - -	Ditto -	39	Fall of stone - - -	–	1	–	–	–	
„ 28	13	Lilleshall -	Wellington - -	Lilleshall Company -	J. Bucknall - -	Ditto -	—	Fall of roof - - -	–	1	–	–	–	3
Nov. 3	14	Glasshouse -	Newcastle - -	Gavin Addie - -	M. Evans & another	- -	—	Bricking gave way and crushed them.	–	–	2	–	–	2
Dec. 10	15	Shelton - -	Stoke - -	Lord Granville - -	J. Burrows - -	Miner -	15	Explosion of fire-damp -	1	–	–	–	–	
„ 16	16	Goldenhill -	Tunstall - -	Williamson, Brothers -	G. Smith - -	Ditto -	24	Fall of stone - - -	–	1	–	–	–	2
								Total - -	1	10	4	2	–	17

SUMMARY.

Cause of Death.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	Total.	Increase.	Decrease.
Explosions - -	–	–	–	–	–	–	–	–	–	–	–	1	1	1	–
Falls of Roof -	2	2	–	1	–	–	–	–	2	2	–	1	10	4	–
In Shafts - -	–	–	1	–	–	–	–	1	–	–	2	–	4	–	11
Miscellaneous -	–	–	–	–	–	–	–	1	–	1	–	–	2	–	1
Above ground -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	2	1	1	–	–	–	2	2	3	2	2	17	–	7
No. of accidents -	2	2	1	1	–	–	–	2	2	3	1	2	16	–	–

Deaths in North Staffordshire, 9 ; decrease, 2.
„ Shropshire - 8 ; „ 5.
17

Mr. Brough's Report.

REPORT of the WORKING of the MINES INSPECTION ACT (23 & 24 Vict. c. 151.) for the SOUTH-WESTERN DISTRICT, during the Year ended 31st December 1865.—By LIONEL BROUGH, Esq., F.G.S.

Clifton, March 15, 1866.

SIR,

IN obedience to the requirement of the 27th section of the Act of Parliament for the regulation and inspection of mines, I have now the honour to submit to your notice my report on the South-western Division for 1865.

This document is accompanied by the usual schedule of all communicated separate accidents in the collieries of the district, together with the number of persons who lost their lives in consequence thereof. A statement is also appended to the lists clearly showing that more deaths occurred throughout the twelvemonths under notice than in 1864; and even in that year more people were killed than in 1863. These lists are framed with such accuracy that comparison can easily and at any time be instituted as regards stated periods, or, indeed, between any given number of years since inspection was first established by law.

The leading column is disastrous. It is true that there was but one fatal "explosion of fire-damp," but that killed 26 of our fellow-creatures; whilst in 1864, no more than six persons lost their lives by this terrible foe to the miner.

The next heading also exhibits increase, but by no manner of means in the same dreadful proportion. Thirty-four men and boys were deprived of life by "falls of coal and stone" in 1865; in the preceding year 33 was the number.

The third column details the loss in "pit shafts." Here the fatality is slightly remitted, for in the year on which I now report, there were but 10 deaths; in 1864, 13 took place.

The same may be said of "Miscellaneous causes." Eleven persons lost their lives in 1865, whilst during the previous year 12 was the number that perished.

As regards "above-ground accidents" there is also improvement. One death only is to be found in the list, whereas, unfortunately, in 1864, three were recorded. However, I must repeat that they never ought to be heard of at all considering the advantages that abundant space and open day afford over restricted areas underground, accompanied by glimmering uncertain lamp or candle light.

The "Non-fatal" colliery list I also now hand in. Its record of personal hurt is much about the same as in 1864; the present year shows 96 separate accidents and 111 people wounded; the past, 99 accidents and 109 persons injured.

Ironstone having now a permanent place in the Inspector's reports, I beg permission to lay that list before you also, with the whole of the details connected with such particular branch of mining operations in my district. Thirteen separate accidents were reported, and 14 deaths ensued therefrom. In 1864 17 accidents and 17 deaths were recorded, so that in this our new duty I am glad again to be able to show that improvement has taken place. It is further enhanced by the fact that the "get of mine" in 1865 considerably expanded itself over previous years, so that proportionate diminution as regards death still continues in this department.

The "Non-fatal" casualties in iron mines amounted to 20 attended with injury in various ways to 26 persons; this is in excess of 1864, when 13 separate accidents ensued, and only the same number of people were seriously hurt thereby.

In addition to all the calamities herein-before described, both with regard to coal and to ironstone mines, certain others must be recorded, but I cannot place them elsewhere than in the body of the report itself, because none of the Legislative measures empowering the Inspectors to act appear to touch on them in any clear or definable degree. Early in January the local newspapers spoke of a death in a small shaft belonging to the Ebbw Vale Iron Company. I made immediate inquiry, and found that it was a shallow pit connected with a water culvert at the Pontypool Works, and it turned out that a man named Henry Coombs was suffocated in it. I mention his death though it is altogether out of the limits of the Mines Inspection Act of Parliament.

On the 27th of April, James Saunders was found dead between two waggons on the main railroad running from the Varteg Hill pits, but whether from sudden illness or other cause is unknown.

May the 8th, two poor fellows fell out of a descending cart in Messieurs Allaway's iron ore pit in the Forest of Dean, and were instantly killed, but as the mine works are situate in the limestone, I cannot insert their deaths in the list. I believe the inclusion in the next new Act of Parliament of all mines in and above the carboniferons limestone, will be attended with great advantages to the cause of humanity.

On the 20th of May Samuel Hopton lost his life on a railroad leading to and from the Doxhall pits, belonging to Messrs. Wethered and Cossham, of Kingswood.

September 29th Thomas Thomas fell off a ballast waggon on the Caerphilly branch of the Brecon and Merthyr Railway passing near the Rhos Lantwit Colliery. It was reported to me in writing, therefore I give it insertion, but I am inclined to think that this case, together with others here recorded of the kind, should be inquired into by those Government inspectors whose business it is to attend to railway matters.

Altogether, then, the various returns may be classed as follows:—Fatal accidents in coal, 56; deaths, 82; non-fatal accidents in coal, 96; occasioning injury to 111 persons. Fatal accidents in ironstone, 13, attended with deaths to 14 people; non fatal-accidents in ironstone, 20, causing hurt to 26 persons; undefined casualties, last commented on, five, producing six deaths; altogether amounting to 190 separate accidents, affecting 239 persons, of whom 102 were killed and 137 were hurt. Thus, of the workpeople of the district, in the midst of their peaceful and cheerful labour, 239 were suddenly struck down in one year, of whom 102 lost their lives, and 137 were injured. That is to say, more than 42½ per cent. of the whole were killed, a proportion of dead to wounded that the most improved fire-arms of modern science could scarcely bring about, even in very severely contested battles.

A few of the fatal cases in the lists had better now be spoken of, in order to explain exactly how they occurred, and also some general inferences drawn as to how they might have been prevented or avoided.

"Explosion of fire-damp." As has already been stated, only one of these calamities took place in the whole course of the year, and in the fatal list it has for its number 32. On the 16th of June the gas fired in the New Bedwellty pits in Monmouthshire, the property of the Tredegar Iron Company. I lost no time in proceeding to the colliery, and carefully inspected it with the view of determining the cause of the catastrophe. This I satisfactorily enough made out, and then prepared myself to give evidence at the inquest, every sitting of which I attended.

This Bedwellty Colliery, including the workings to the deep of the Ty Tryst pits, is one of considerable importance, but the portion or district under immediate notice is not at present unusually large, although indeed it is laid out for great future extension. There are two deep shafts in immediate connexion with the part exploded, and two straight level roads trending away to the westward, where are to be found only three cross headings on the rise side, with their corresponding groups of stalls, and that is just all. The whole is easily ventilated; indeed, I found no fault with the quantity of air passing through the workings, if it had but gone through the *whole* of them. I do not believe that at the time of the calamity there were so many as 50 persons at work in this division, even if all had been in on that morning; therefore everything connected with the explosion simply indicates that it never ought to have taken place at all. But the evidence I gave at the inquest may perhaps be a more understandable and correct description of the colliery and of the whole affair than any new matter that I can possibly now put to paper. In words it was exactly to the following effect:—

"As soon as I heard of the explosion I at once proceeded to the spot, and went down the Bedwellty pit as soon as I arrived there. This, my first investigation after the calamity, was on Saturday morning, the 17th of June. The following week I made further inspections, and am now enabled to give evidence on the subject. There are two shafts on the big vein in the Bedwellty Colliery, each of about 230 yards in depth, of large dimensions (16 feet by 11 feet), and situated at about 12 yards from each other. Then, again, there are two shafts at Ty Tryst of similar sectional area, and in direct communication with Bedwellty, so that the means of ventilation and of escape are most abundant. The intake level is of horse-road size, as is also that for the returns. They are of sufficient dimensions for sound ventilation, and the cross headings and main cross holes are not behindhand in that particular. I never had occasion to find fault with the quantity of air in this colliery (which I have often visited), neither do I allege that there was any falling off on the morniug of the explosion. I am therefore of opinion that the catastrophe is by no means attributable to want of power or of proper areas underground to produce a safe and adequate amount of ventilation.

PLAN

SHEWING PART OF THE UNDERGROUND COAL

WORKINGS

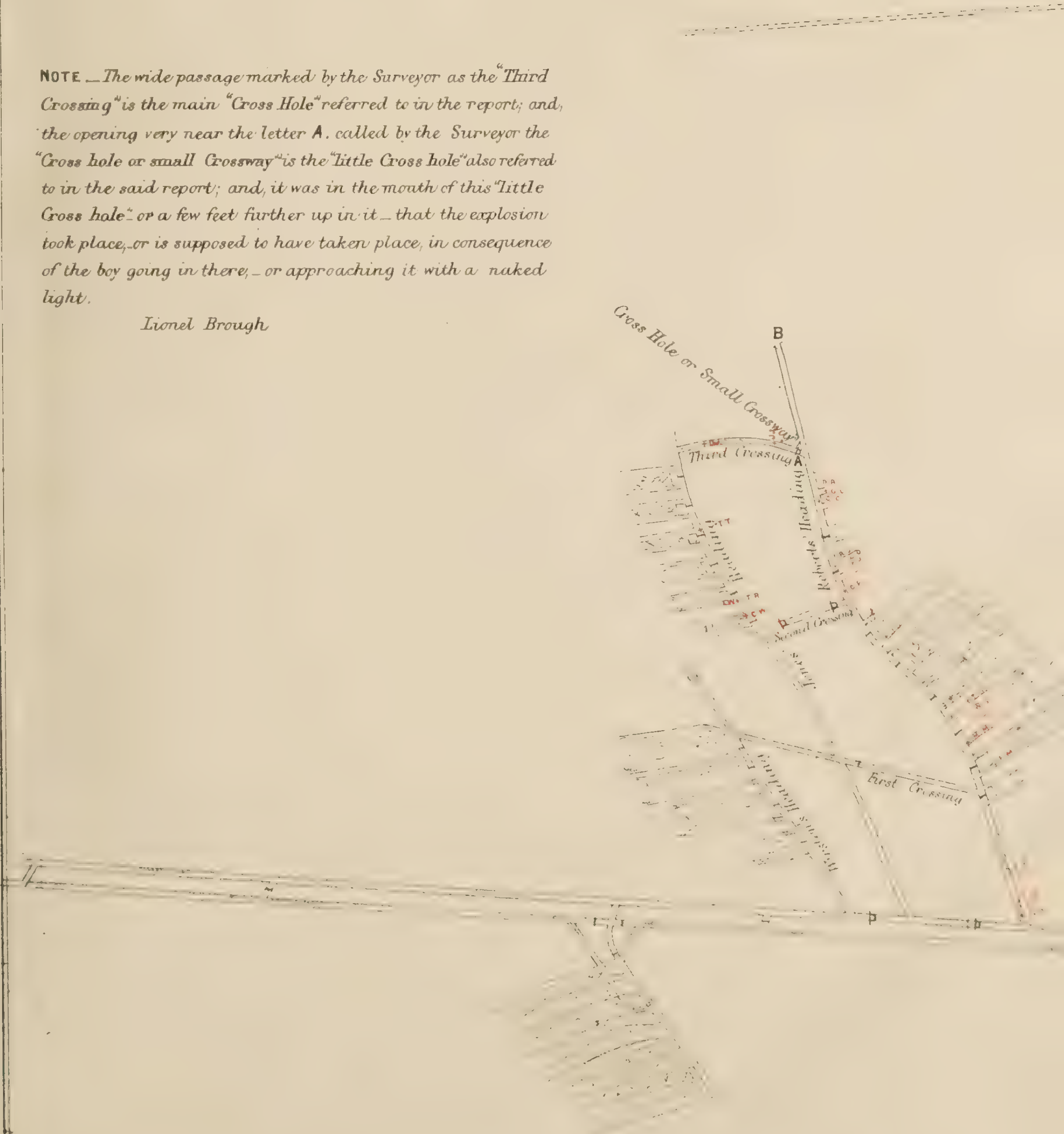
OF THE

BEDWELLTY PIT NEAR TREDEGAR,

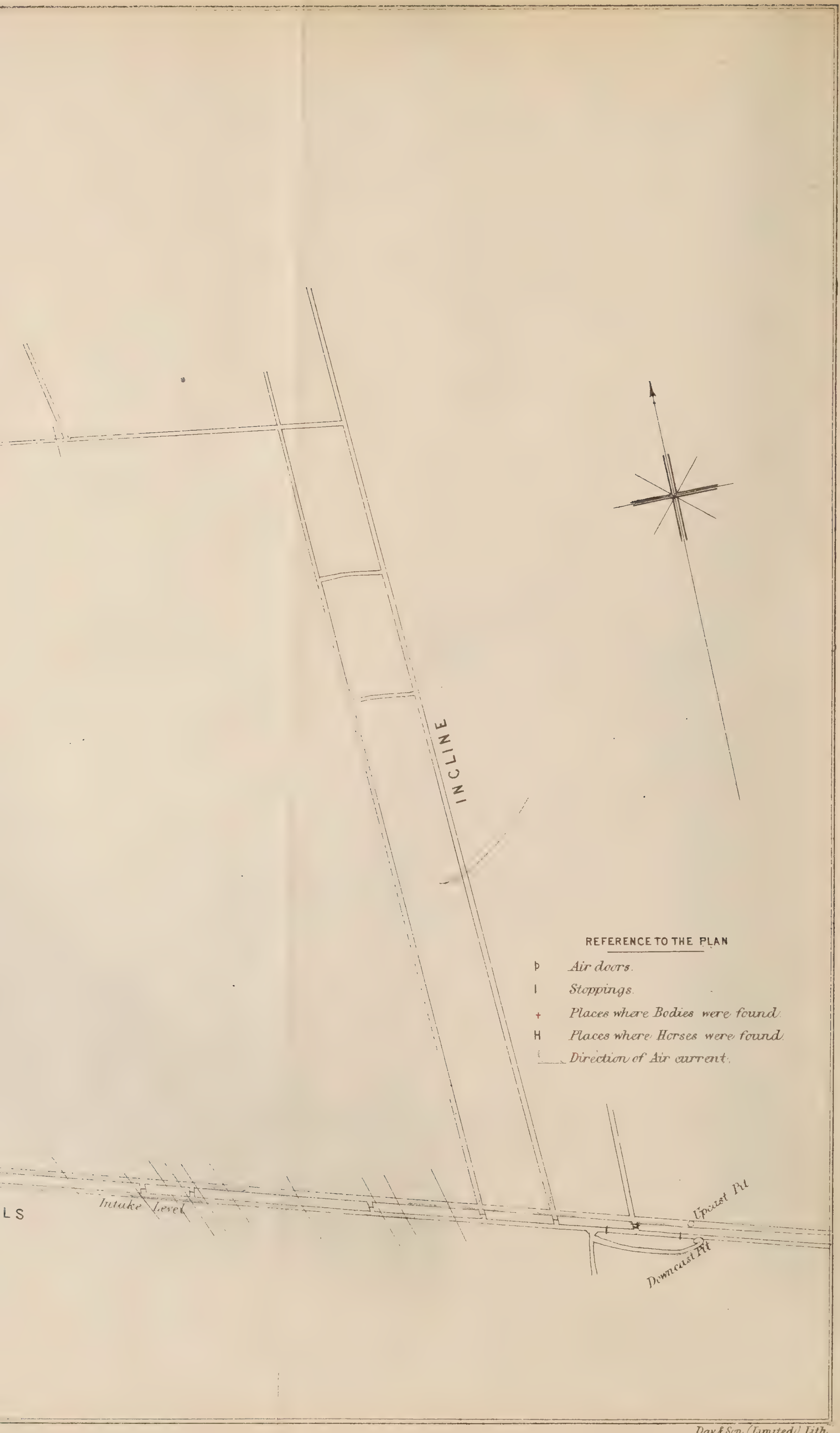
WHERE AN EXPLOSION HAPPENED ON FRIDAY, JUNE 16TH 1865.

NOTE _ *The wide passage marked by the Surveyor as the "Third Crossing" is the main "Cross Hole" referred to in the report; and, the opening very near the letter* A. *called by the Surveyor the "Cross hole or small Crossway" is the "little Cross hole" also referred to in the said report; and, it was in the mouth of this "little Cross hole" or a few feet further up in it _ that the explosion took place, _ or is supposed to have taken place, in consequence of the boy going in there, _ or approaching it with a naked light.*

Lionel Brough


Cross Hole or Small Crossway
B
Third Crossing
A
Roberts' Heading
Second Crossing
First Crossing

Scale Four Chains to the Inch


INCLINE
LS
Intake Level
Upcast Pit
Downcast Pit
REFERENCE TO THE PLAN
Þ Air doors.
I Stoppings.
+ Places where Bodies were found.
H Places where Horses were found.
Direction of Air current.

Day & Son, (Limited) Lith.

1865, and occupied many hours of that day. The second sitting took place on Monday the 9th of October, lasting all that day, and was continued throughout the next, Tuesday the 10th. The third hearing of the same case was on Tuesday the 24th of October, when it was brought to a close after the magistrates had sat four clear days on one single information. The evidence of the principal witnesses did not appear to differ from that adduced at the coroner's inquest. There was an admission that it was wrong to part with the door, and an acknowledgment that the dangerous gas remained in undiminished quantity from the time when it was taken down by David Jones up to the moment of the explosion, a period about equal to two entire days; but for all that they had resolved to leave things exactly as they were until the following Saturday night, but that Saturday night never came for 26 of their fellow-creatures.

My testimony tended to prove that "Roberts's heading," in its normal state (that is when the door was up) was a working place because a considerable portion of the main ventilation actually passed through it, that is to say, up one side of the brattice and so on to the face, and down the other side, and then into certain stalls still lower down, and belonging to the same heading. Also, that the travelling roads (the cross holes) to and from such working places, should likewise be in a fit state, according to the rule. However, the magistrates decided that "Roberts's heading" on the morning of the accident was not a working place within the meaning of the Act, and they therefore dismissed the case, though they granted a point raised for argument before the Court of Queen's Bench.

The next information was for infraction of the 2nd General Rule, which says that "All entrances to any place not in actual course of working and extension, and suspected to contain dangerous gas of any kind, shall be properly fenced off so as to prevent access thereto." On the same day (the 24th of October) its hearing began, and came to the same conclusion as the first case, namely, against the Inspector.

On the 22nd of January of the present year, I again appeared before the magistrates at Tredegar in support of the last information, that of neglect of the 3rd General Rule, which demands that "Whenever safety lamps are required to be used, they shall be first examined and securely locked by a person or persons duly authorized for this purpose." This also underwent a hearing and it became arranged that the decision should be given in on the following Friday, but it was afterwards put off until Friday the 23rd of February, when the magistrates again sat, and declared that they dismissed this case also, as there was not sufficient evidence to support it; but as with the first information a case was granted for the Court of Queen's Bench. Thus, though the explosion took place even earlier than the middle of last year, it will be far into the present one before the question finally disappears from litigation.

"Roberts's Heading" was an important feature of the whole. Certain circumstances had occasioned its temporary stoppage, but evidence showed that that suspension was but for a time, indeed it was clearly elicited that they were about to drive it onwards again. In fact, its extension to the rise was part of a grand and important scheme for the general enlargement of the colliery, its object being to intersect a proposed upper level running to the westward with the view to get at an area of fresh maiden coal. I invariably looked on it, and do now, as a working place, because of its possessing the quality of being really a new "winning;" therefore, my construction of the circumstances continue me in the belief that it came as much under the first General Rule as any other place in all the pit. Moreover, as already stated, until David Jones unlawfully took down that door, it actually formed one of the main air passages of that particular district of the Bedwellty New Colliery. He and his son were occupied in improving the main cross hole in order to make it more available for men and products to travel over; therefore this, one of the approaches to Roberts's heading, was also, like the heading itself, under the restrictions of the Act of Parliament. But the door became rather an impediment to their getting down some top coal, and this it was that led Jones to the rash and illegal step of removing it altogether. I now beg to repeat, that when the managers discovered this, they ought to have caused it to be instantly set up again, and so restored the original ventilation, which was easy enough: reparation of the brattice would have effected all that. But, unfortunately, they postponed the operation for a time, resolving to keep the "Band" going until Saturday night, notwithstanding that their own special rule says, "that accumulations of fire-damp shall be removed with great care by the underlooker "or fireman, *and without delay*, but in no case until the men are out of danger."

As to the locked lamp question, the very fact of such a considerable mass of gas being left to the mercy of any heedless child or workmen, is to me astonishing. However, there are many reasons to believe that the son, not the father, fired the gas; most of the other practical witnesses besides myself came to this conclusion. He was found nearly in front of the mouth of the little cross hole, and against the opposite rib his brains were dashed out, whilst the body of his father was picked up many yards to the westward of that point. If this poor child was to be trusted at all in dangerous places, he surely ought to have been provided with a locked safety lamp I made a statement to that effect in all the evidence I gave on the subject, and I deem it strictly my duty to repeat it in this report.

I have done my best to supply a clear explanation of the Bedwellty explosion, because it was one of a very lamentable character; but the drawing up or framing of such detail is difficult as well as painful. Nevertheless, the very nature of our humanity renders it compulsory, not only to exercise firmnness and diligence in the investigation of all calamities of the kind, but, also, to be extremely careful and correct in the records and descriptions arising out of them.

The next cause of death usually coming under notice for special remark in the Inspector's reports is "Fall of coal, stone, and iron-mine."

On this subject I really do not know what observations to add to those contained in my previous communications, in all of which the immense loss of human life has been dwelt upon at very considerable length. The annual fatality by such accidents is overwhelming. In our coal and ironstone mines during 1865 the existence of 416 persons was cut short in England, Wales, and Scotland, by falls of material under ground, and even more in the immediately preceding year; dreaded as it is "fire-damp" does not come up to it in the numbers swept away from life. Whether or not it may become necessary that a conventional mode of setting up pit wood or rather a stipulated amount or quantity of timbering be insisted on, it is not for me to say. But the evil is so great that amelioration or mitigation in some shape or other will soon have to be taken into very serious consideration.

"Shaft Accidents." No. 4 is the breaking of a hempen rope, and is remarkable on account of the ignorance displayed as regards the strength of material. The boiler needed such repair as would occupy a certain portion of time, so that it became necessary to attend to the horses under ground without the aid of the winding engine. Charles Lewis, therefore, went down the pit by means of a round rope handled on the top by a number of men possessing strength enough to lower him down and haul him up again. He accordingly went below and fed the horses and then signalled that he was ready to ascend. When near the top the rope broke suddenly, and he fell to the bottom and was killed. At the inquest I examined the rope and found it in some places in a frightful state of rottenness, so bad, indeed, that no man ever should have been permitted to trust his life on it. Even this rope, impaired as it was, had to be borrowed; but at the inquest it was ascertained that better were to be had in the neighbourhood. If they had given themselves the trouble to secure a sound one, Charles Lewis might, and most likely would, have been alive at this moment.

According to the rules this neglect was an infraction of the law and of necessity I prosecuted the owner, who was fined 3*l.* and expenses by the magistrates sitting in petty sessions at Coleford in the Forest of Dean. The amount of the penalty was handed over to the widow of the deceased as is now customary.

No. 5. Derangement having taken place by the cage to the lifting guards, the banksman caused them to be fastened high up in the pit framing for examination and re-adjustment, and whilst that was being performed he stationed a man to keep the people off the top. But it was early in the morning when the unfortunate deceased came to his work, and so dark that he walked past the watcher straight into the pit, and fell to the bottom, more than 220 yards perpendicular drop. There can be no doubt that the glare of the fires had confused him. It was stated at the inquest that the poor man was 75 years of age; if so he certainly ought to have been spared underground employments, or indeed any other whatever, at that very advanced period of his life. The adjustment of the guards ought to have been accomplished the day before, whilst it was still light, and then in all probability the accident would not have occurred.

No. 6 is a case so extraordinary that I feel constrained to make more than usual mention of it. George Clark, carpenter, and George Edwards, shaftman, had been for some time occupied in gearing up one of the Wellsway pits with wooden guides, and on the morning of the 3rd of February 1865, they got into the carriage or cage to be lowered down to their work as usual. Directly after the engine had started the flat wire rope gave way, and they were precipitated down the shaft right on to a wooden scaffold, a distance of about 67 fathoms, the true bottom being 20 fathoms still deeper. Their fall, as afterwards measured was as near as possible, 130 yards. Clark was instantly killed, in fact, broken to pieces, the other escaped with a fractured leg and some terrible contusions, but, strange to say, he is now completely restored. I recently had a letter from the Countess of Waldegrave's manager, stating that "George "Edwards is alive and well. He commenced work about five months ago, and with "genuine English courage asked me for his old place as shaftman." I need not say that this is dangerous employment, and yet he preferred it to ordinary mining. He fell a distance equal to 390 feet, which will about correspond with a vertical descent from the highest point of Saint Paul's Cathedral. In all my experience nothing like this has come under my notice, that is to say, unaccompanied by immediate death. Those who are familiar with the natural law which governs the accellerating velocity of falling bodies must I am sure, with me, be astonished that life was not instantaneously crushed out of him; nevertheless, Edwards lives and is at his old employment again, where in fact I saw him on the 22d of February of this year.

At the time of the accident and inquest I carefully examined the rope and found that some of the wires had undergone such deterioration and alteration in their molecular structure as to deprive them of all their strength and integrity. If the rope had been thoroughly reliable poor Clark may have been pursuing his calling at the present time.

No. 13 is also a fall from the top of the pit to the bottom, but, unfortunately, with no such saving of life as immediately before described. An iron pin came out severing all connexion between the flat rope and the gamborine, and thus the ascending band reached the top without its load. William Morgan, the engineer (a most valuable man), immediately attached a pair of chain tacklers to the end, placing his feet in the double of one of them, and then, one arm round the main rope with a torch in that hand and a hammer in the other, the signal was given to lower away. But his weight was insufficient to taughten the slack (between two very high props) of this immensely large and heavy hempen band. The banksmen were standing on the cowls or swing doors which were then down over the top of the pit, and they pulled with all their strength, but in vain, they could not bring up the bend or bight behind them. This hanging slack must have surged up Morgan's head violently against the under surface of the doors and forced him to quit his hold. He fell to the bottom, a distance of nearly 290 yards, and was knocked to pieces. He could have gone down the other pit close by and through the drift to the bottom of the main shaft, and so fastened gamborine and rope together, but anxious to get the winding of coal on again as quickly as possible, he chose the daring and dangerous method that unfortunately cost him his life.

I particularize the above case in order to point out how superior a pit is which has guides, cages, catches, and lifting wickets. Loose carts and swing doors over the top were formerly used in the Forest of Dean, and indeed to some extent are at present, as for example in the colliery where poor Morgan was killed; but some of the new pits are now provided with the more modern appliance of conducting slides from top to bottom. There cannot possibly be any comparison between the two modes of bringing the products and the people to the surface, either as regards speed or safety.

No. 26 is a shaft accident, fatal and melancholy in its character. At the Yate Colliery in Glocestershire the working places are far to the deep of the pit bottom, and of course a long incline plane becomes the method of communication. The coal is brought up this slope by rope and chain worked by the same steam engine that winds the perpendicular shaft. Ropes for hauling from the deep (often wire above and links below), rub against the very side of the pit, and are termed "bye chains, dukey ropes, gug ropes," and are known even by other local names. However, whatever they are called, in my opinion they are never altogether free from danger. For the sake of perspicuity it will be better to term the one under notice of the "bye chain." Now, the round wire rope which forms the upper portion of this mixed band was, when required, removed from the drum on surface, and hitched to a safety block when people were travelling by the other or "main rope." But as a cage full of colliers were coming up the vertical shaft on the 27th of April last the hook which attached the "bye chain" to the safety block suddenly broke, and rope and heavy chain fell to the bottom of the shaft. Anthony Wherrett happened to be one of the men at that moment ascending, and long before they were half way up the falling rope and chain struck the bonnet (far too light and thin) with fearful violence and completely bulged it in, and Wherrett being the tallest in the cage received the full force of the blow and died immediately.

In consequence of this entire separation of "bye rope" from the safety block, its chain continuation under ground ran wild, and the cart at the end of it caught Simmons (then walking up the slope) before he could enter a place of refuge, and so injured him that he died whilst they were bringing him out of the pit.

My object in giving these details is that I may at the same time remark that the safer and in the end more economical class of "winning" in pitching stratification, would be by sinking to the extreme dip at once, thus outsetting and doing away with the necessity of all expensive slopes and inclined planes. Side or "bye ropes and chains" I must repeat are extremely objectionable in main winding pits in every point of view, but especially as far as the safety of the colliers and miners are concerned.

In this afflicting case two rules were broken; consequently the usual prosecution under the Act ensued, and the magistrates sitting at the Cross-hands petty sessions inflicted on the owners a penalty of 5*l.* on each information together with costs also. The money as before handed over to the widows.

Shaft accidents are far too numerous, at the same time it is but reasonable and just to state that the lowering of men and boys so much beneath the surface of the earth and winding them up again cannot always be said to be entirely free from danger; undetected, unthought of derangement may bring it about; indeed it often does. Consequently, and especially now that mining in Britain is getting deeper and deeper, it behoves proprietors and agents to be exceedingly careful and particular in all matters and things that relate to the putting down of new "winnings" and to the general strength of all materials. Pits should be ample in diameter, and well and securely lined throughout their entire depth. A great area of strata should be left intact and solid in every direction around the bottom, so that no hungry and incosiderate excavation of coal might endanger the soundness and perpendicularity of the shafts.

The guides (of red or pitch pine), ought to be securely fastened and stayed at short distances, and the truest gauge and parallelism maintained and continually watched and looked after. It would be well that the framing at the top be sufficiently elevated, and that the timber entering into its construction be of great scantling and well and solidly based. The larger in reason that the pulleys overhead are, the better, and the winding engine not too far off the top of the pit, nor yet too close, for there is evil in either, or in both. Engine houses ought to possess solid foundations and should be of the best possible masonry; the engines themselves of great surplus power, and all their parts liberally calculated for strength and efficiency. Extended diameters in rope rolls, powerful breaks, and able, sober, and fairly remunerated engine men.

Thus, extra strong wire ropes can be used, and such speed of travel in the shaft arrived at as may be consistent with human safety. Lifting wickets or guards of necessity become items in these improvements. As to the means of generating steam, though last spoken of, is still of the first importance, it should be most abundant; scant boiler room is but another expression for explosion, and is obviously but miserable and very false economy. It is hardly necessary to speak of efficient steam and water gauges, together with safety-valves of considerable diameter and perfect freedom of action.

The "Miscellaneous" column is the next in order, and No. 2 of the list is simply another proof of the uncertainty of human life. No. 8 is of the same class, but still more afflicting, as indeed are Nos. 40, 42, 43, 49, and 51. All the seven arose in some shape or other from crush of tubs or trams, and throughout the kingdom it is a description of accident dreadfully frequent in its occurrence.

In my district boys of too tender an age are sometimes appointed hauliers when really they possess neither strength of body or mind sufficient for such responsible and dangerous employment, especially with the cross-heading system of "lead" that prevails in Monmouthshire and South Wales. Hauliers should be young men, not mere children. I beg here to repeat advice often given, that in all steep roadways under ground, the horses should work in shafts or limbers. The ponderous iron trams of Wales can scarcely be kept back when descending cross headings even by all the strength of a man; then, surely, children should not be hauliers. The very empties are load enough without coal or ironstone. Last March this division of mining labour was entered into, and as full descriptions and recommendations given as the narrow limits of an annual report would permit. In the meanwhile I would wish to advise all owners and managers to take the subject into their serious consideration, and they will find that any steps taken to prevent accidents on horse roads and machine inclines, will not only be humanity but economy.

Of course boys must work underground, if they did not our miners in coal and metals would die out and disappear. To become a first-rate collier or miner it is necessary to commence early. Twelve years is a reasonable period of life to begin at, I should not like to see even a door boy at work under that age; and, as far as that goes, it may be remarked that looking after a door requires great intelligence and carefulness. It is not unlikely that many fatal explosions have occurred through the heedlessness and indifference of thoughtless boys; leaving doors open is a very serious matter in fiery pits.

Moreover, when boys are too young they are physically unequal to the long hours usually assigned to "trappers." It is not long since I found one of them fast asleep and lying right across the rails of the horse road; and but a few weeks previous to that, a boy sleeping in a similarly careless manner actually had his leg broken by the horse and tram going right over him.

In some collieries of my district boys are taken from their own doors and sent with the hauliers to open others and render general assistance. I am of opinion that they should never go with the trams at all; in fact, the annual lists will show that many children lose their lives in this manner; it is a practice that ought to be immediately abolished.

As a further remark about boys, I beg to state that my observations convince me that the proprietors of collieries are not desirous to employ them until they are twelve. I certainly do find them sometimes under that age, and on a few occasions actually under ten; but when I came to make strict inquiry and investigation it became evident that the parents were to blame, not the owners or managers. Whenever I meet with such children in the pit I do not leave it until they are sent out of the work altogether.

I am glad to say that I have but little comment to make on the fatal occurrences in the ironstone mines of my district, because the results of the year were more than usually favourable; however, one of so lamentable a character did take place as to demand particular observation. It is to be found in No. 13, in fact the very last of that "list," Henry and James Williams, aged respectively 19 and 12, had drilled the usual cylindrical shot chamber in the rock, and had charged it with the proper quantity of gunpowder, but, unfortunately, they drove in with a heavy hammer the steel needle or pricker, and the almost constant result ensued; the point came in contact with siliceous matter and elicited a spark, which fired the powder, and the two brothers were killed.

In the same great centre of industry (Blaenavon) William Davies, a miner, lost his life (see No. 5 of the same list) from the very same cause.

I did not in my description of the fatal accidents in collieries speak about premature or unexpected explosions in blasting, but even there, one occurred in a similarly afflicting manner. Also it was reported to me that two poor fellows were shockingly mangled and mutilated in a stone quarry by a shot going off before its time. Of course quarries do not come under inspection, but still, quarrymen are as much our fellow creatures as colliers are.

I have spoken of this particular cause of disaster in nearly all my annual reports, and I now again, warn miners of every description or class, to make use of copper as much as they possibly can for blasting purposes. Of course the drills or borers must be made of steel, but surely the "needle" can be of the more harmless metal. Many of the work-people already begin to comprehend the greater safety that copper affords, but, until the owners and agents make it one of the special rules, or even one of their own byelaws, this terrible killing, blinding, and maiming will still go on.

"Education," though really more important than anything else, has generally found its place only in the very concluding pages of these mining records.

I find it difficult to make any observations on this subject more explanatory or satisfactory than those contained in the reports of many previous years. Nevertheless, so many schools are to be seen in the colliery districts, that I almost arrive at the conclusion that we have come to the transition, if not to a more advanced state, as regards instruction. But, however abundantly these establishments may be dotted over all the coal-fields, I still do not recognize the marked advance that may be considered commensurate with the existing means of education; the people themselves must put their shoulders to the wheel.

Whether or not there may be sectional differences amongst the parties teaching, or whether those to be taught prefer work to learning, I am not well able to say. My avocations keep me as much out of sunlight as in it, therefore I do not altogether know what is going on in the schools, but I fear the actual progress of the mining population is not equal to the strong desire and original intention of the Legislature, and of the intelligent classes of the kingdom in general. For all that I have here said, there is still a glimmering improvement that was by no means apparent ten or a dozen years ago, and I would fain hope that it will continue to grow brighter. Increased knowledge really and truly means increased morality and happiness, and I trust that those who have so faithfully struggled for a larger measure of improvement amongst the working classes, will, in no great length of time, find that they have not striven in vain, but that the dawn will surely be followed by that complete enlightment which sound education alone, and only, can confer.

I have, &c.

Lionel Brough.

The Right Hon. Sir George Grey, Bart., M.P., G.C.B.,
Her Majesty's Principal Secretary of State for the Home Department.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS of LIFE arising therefrom, in the SOUTH-WESTERN DISTRICT OF GREAT BRITAIN, during the Year ended the 31st day of December 1865.

This Division of the Coal Mines of the Kingdom comprises all Monmouthshire, Gloucestershire on both sides of the Severn, the whole of Somersetshire; also, parts of Glamorganshire, Breconshire, and Devonshire.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. Jan. 3	1	New Tredegar	Monmouthshire	George Elliott & Co.	Edward Morgan	Shifter	35	Sudden fall of stone from roof	–	1	–	–	–
„ 14	2	New Tredegar	Monmouthshire	Ditto	William Swankoe	Door boy	16	Fell down in front of a tram which went over and killed him.	–	–	–	1	–
„ 16	3	Nantyglo	Monmouthshire	J. & C. Bailey	John Barclay	Collier	63	Fall of coal, which so injured him, as to cause death very shortly after the accident occurred.	–	1	–	–	–
„ 18	4	Princess Royal	Forest of Dean	Samuel Morgan	Charles Lewis	Collier	30	A rope, by which he was ascending the pit, broke, and he fell to the bottom and lost his life.	–	–	1	–	–
„ 20	5	Ashton Vale	Somersetshire	E. Knight & Co.	Thomas Summerhill	Collier	75	Walked right into the main shaft early in the morning, and fell perpendicularly down more than 220 yards.	–	–	1	–	–
Feb. 3	6	Wellsway	Somersetshire	Countess of Waldegrave	George Clark	Carpenter	40	A flat wire rope, by which he with a fellow workman was descending, suddenly snapped. This is a most remarkable case.	–	–	1	–	–
„ 3	7	Varteg	Monmouthshire	Partridge & Jones	David Williams	Onsetter	45	A tram of rubbish had arrived almost at daylight, when a piece of stone detached itself and fell down the pit, striking deceased on the head. He certainly ought not to have been standing in the very bottom until the cage rested on the catches, and not even then until the tram was moved into the siding.	–	–	1	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. Feb. 8	8	Blaenavon	Monmouthshire	Blaenavon Iron Company	Herbert Williams	Overman	43	On the 3rd instant a tram underground was loaded with iron rails for the use of the colliery, and one of them projecting too far unfortunately touched the horse, and caused him to take fright and run. The overman endeavoured to stop him, but was overwhelmed by horse and tram, and received such injuries as to render amputation necessary, 24 hours after which he died (on the 9th).	–	–	–	1	–
,, 14	9	Tyr Phil	Glamorganshire	Rhymney Iron Company	David Rees	Collier	20	A thin scale of shale fell from roof, and so injured him as to bring about death two hours after the accident.	–	1	–	–	–
,, 15	10	Abercarn	Monmouthshire	Ebbw Vale Company	James Eatwell	Onsetter	50	A piece of coal fell from an ascending loaded tram. There was not the least occasion for him to be so near the bottom when the band was moving.	–	–	1	–	–
,, 15	11	Tredegar	Monmouthshire	Tredegar Iron Company	James Lloyd	Collier	14	The heading was undergoing the process of "drawing back," when about 10 tons of coal and shale fell, and buried the boy and the man he was working with for two hours or more. When finally got out the man was found to be almost unharmed, but the poor boy was quite dead.	–	1	–	–	–
,, 27	12	Abercarn	Monmouthshire	Ebbw Vale Company	William Davis	Mason	50	By a fall from a ladder on the 24th he received such injuries as to occasion death on the 27th.	–	–	–	1	–
Mar. 1	13	Lightmoor	Forest of Dean	H. Crawshay	William Morgan	Engineer	32	Fell down a shaft nearly 300 yards in depth.	–	–	1	–	–
,, 3	14	Tredegar	Monmouthshire	Tredegar Iron Company	Henry Davis	Haulier	17	Whilst riding out on the full trams a stone fell from the roof and caused his death.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. Mar. 9	15	Braysdown	Somersetshire	Braysdown Coal Company	Joseph Parfitt	Collier	39	He was holing in the "Little vein" (under the "Great vein") when a piece nearly a ton weight fell out of the roof and killed him. Intersection of smooth joints occasioned the stone to drop.	–	1	–	–	–
,, 16	16	Mells	Somersetshire	Mells Coal Company	John Talbot	Sinker	50	Unexpected explosion of a shot in the sinking pit. These premature and otherwise unexpected discharges of gunpowder are far more frequent than they ought to be.	–	–	–	1	–
,, 21	17	Timsbury	Somersetshire	Timsbury Coal Company	William Probert	Collier	60	Fall of roof lying over "Great vein coal."	–	1	–	–	–
,, 25	18	Tredegar	Monmouthshire	Tredegar Iron Company	James Britten	Collier	30	Sudden fall of about 13 tons of coal, nearly five of which fell on him, occasioning instantaneous loss of life.	–	1	–	–	–
,, 27	19	New Tredegar	Monmouthshire	George Elliott & Co.	Benjamin Jones	Collier	28	Fall of stone. The unfortunate deceased had his safety lamp fastened to him, and this the fall of stuff drove so forcibly into his chest as to cause immediate death.	–	1	–	–	–
,, 31	20	Nailsea	Somersetshire	Isaac White & Co.	Henry Sheddick	Collier	30	Fall of roof by concealed "smooth." The place was only five feet wide, and the joint never showed itself until the stuff had fallen.	–	1	–	–	–
April 12	21	Crumpmeadow	Forest of Dean	Goold & Co.	William Lockston	Collier	17	Fall of roof. This also happened from concealed joint tailing back into the solid.	–	1	–	–	–
,, ,,	22	Tredegar	Monmouthshire	Tredegar Iron Company	Daniel Edwards	Collier	40	Fall of coal, about two tons of which came right down upon him.	–	1	–	–	–
,, 13	23	Easton	Gloucestershire	Leonard Boult & Co.	Samuel Lovell	Collier	45	Whilst he was building the gob wall in a "hatching," a piece of roof detached itself and deprived him of life.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. April 17	24	Hafod Van	Monmouthshire	Sir Thomas Phillips	Elijah Robins	Collier	21	Fall of roof whilst cutting coal	–	1	–	–	–
,, 18	25	Nettlebridge	Somersetshire	Nettlebridge Coal Company	Richard Padfield	Collier	26	Sudden fall of top	–	1	–	–	–
,, 27	26	Yate	Gloucestershire	Long, Nowell, & Co.	Anthony Wherrett Luke Simmons	Collier Collier	38 40	By the fracture of an iron hook, and the consequent fall of a "bye rope" down the shaft, Anthony Wherrett was killed in the ascending cage by the rope and chain bulging in the bonnet. Luke Simmons, by reason of the same hook fracture, lost his life on the slope before he could reach a place of refuge. Even this was owing to the shaft accident, though death took place on the underground "incline."	–	–	2	–	–
,, 28	27	New Place	Monmouthshire	Protheroe & Co.	George Bull	Collier	18	Heavy fall of stone on his head	–	1	–	–	–
May 15	28	Risca	Monmouthshire	T. W. Rhodes	James Pipe	Collier	41	Killed by fall of coal whilst stowing rubbish in a single stall.	–	1	–	–	–
June 3	29	Ebbw Vale	Monmouthshire	Ebbw Vale Company	Levy Gates	Incline cleaner.	16	Lost his life at the bottom of No. 15 pit by a piece of coal falling down the shaft from an ascending loaded tram.	–	–	1	–	–
,, 7	30	Cwmbran	Monmouthshire	John Lawrence	Thomas Morgan	Collier	50	Had his back broken in November 1864, and lingered on until the 7th of June of the present year.	–	1	–	–	–
,, 14	31	Radstock	Somersetshire	Countess of Waldegrave	Charles Shepperd	Coal breaker	21	A slip in the roof "let off" a mass of stone as he lay at work, and so injured him that he died about an hour after the accident occurred.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. June 16	32	Tredegar - -	Monmouthshire	Tredegar Iron Company -	26 men and boys -	- - -	—	Explosion of carburetted hydrogen gas in the Bedwelty new colliery. Part of a cross heading had been permitted to fill with fire-damp to the extent of between 50 and 60 yards lengthways, and was thus allowed to remain for a certain number of days, notwithstanding that people occasionally passed and repassed one mouthing of the heading, and a lesser one called the "Cross hole." The facts of this lamentable loss of life will be found fully explained in the body of the report; but I may simply here remark, that the colliers should have been at once taken from their work, and then the gas safely dislodged, an operation easy enough of performance. If this had been so accomplished, the people would in all human probability have been alive, and gaining their daily bread at this present moment.	26	–	–	–	–
July 6	33	Vellett's Level -	Forest of Dean	Trotter, Thomas, & Co. -	Thomas Brown -	Collier -	40	Fall of stone and coal, killing him on the spot.	–	1	–	–	–
„ 8	34	Bargoed - -	Glamorganshire	Thomas Joseph - -	Thomas Edwards -	Collier -	50	Fall of roof in the No. 1 level. It was a semi-spherical mass of matter termed by the colliers a "bell mould," and it suddenly fell on him as he was filling a tram.	–	1	–	–	–
„ 9	35	Coalbrookvale -	Monmouthshire -	Levick & Simpson - -	John Owen - -	Flue man -	55	Suffocated underground by steam and gases.	–	–	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865. July 13	36	Parkfield	Gloucestershire	Wethereds & Cossham	George Hollister	Collier	27	A fall of roof on the 5th of April very severely injured him. He lingered about 14 weeks, and then died of the injuries originally inflicted.	–	1	–	–	–
„ 14	37	Tredegar	Monmouthshire	Tredegar Iron Company	William Reeves	Collier	21	He was riding in to go to work, when it (the tram) got off the old-fashioned plates and knocked out some timber, which brought down a heavy mass of rubbish, and that no doubt suffocated him.	–	1	–	–	–
„ 21	38	Tredegar	Monmouthshire	Tredegar Iron Company	Thomas Williams	Door boy	12	This boy was riding out from his work in a tram, when a fall of rubbish took place and instantaneously killed him. No riding, in or out, should be permitted; strict discipline alone can prevent accidents of this untoward and careless nature. Discipline well carried out by educated under officers will do much; the lack of both care and education is fatal in its results.	–	1	–	–	–
„ 24	39	Tredegar	Monmouthshire	Tredegar Iron Company	Isaac Lewis	Collier	48	Killed in an instant by a very heavy fall of coal.	–	1	–	–	–
„ 25	40	Risca	Monmouthshire	T. W. Rhodes	John Norris	Door boy	13	Fell down before the trams, and the set went right over him.	–	–	–	1	–
Aug. 4	41	Blaenavon	Monmouthshire	Blaenavon Iron Company	Emmanuel Boulton	Collier	20	By a fall of coal on the 3rd his leg was severely injured, and it was thought necessary to amputate it; this was duly performed, but he died on the 4th of the month.	–	1	–	–	–
„ 6	42	New Tredegar	Monmouthshire	George Elliott & Co.	William Rees	Door boy	12	Fell down before the horse on the 5th, the tram going right over him, and the injuries he then and there received caused his death the next day.	–	–	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof	In Shafts.	Miscellaneous.	Above ground.
1865.													
Aug. 26	43	Frysbottom	Somersetshire	Rossiter & Co.	Enoch James	Carting boy	13	Killed on "incline" by crush of tub	–	–	–	1	–
,, 30	44	Abercarn	Monmouthshire	Ebbw Vale Company	Thomas Bowdy	Enginewright	30	On the 24th he was overwhelmed by a heavy piece of metal at the new engine house, both legs were broken, and on the 30th he died.				–	1
Sept. 16	45	Tredegar	Monmouthshire	Tredegar Iron Company	William Jenkins	Collier	50	Whilst holing, a fall of stone from roof took place, and occasioned such injuries that he only lived a couple of hours.	–	1	–	–	–
,, 19	46	Tillery Level	Monmouthshire	Williams & Clapp	William Lloyd	Collier	13	Fall of roof over the "Red Ash coal"	–	1	–	–	–
,, 23	47	Rhymney	Monmouthshire	Rhymney Iron Company	Jacob Nicholas	Collier	27	Injured on the 20th by fall of coal which he was then holing; he survived until the 23rd.	–	1	–	–	–
,, 23	48	Ebbw Vale	Monmouthshire	Ebbw Vale Iron Company	James Bowditch	Pumpman	30	Whilst assisting in the engine pit he fell away, and was picked up dead at the bottom.	–	–	1	–	–
,, 25	49	Sirhowy	Monmouthshire	Ebbw Vale Iron Company	David Evans	Haulier	20	Injured on the 24th of December 1864 by crush of trams, and lingered until this day, when he expired.	–	–	–	1	–
Oct. 20	50	Rhymney	Monmouthshire	Ebbw Vale Iron Company	Thomas George	Collier	31	Killed whilst driving an air course by a fall in the "Big vein coal."	–	1	–	–	–
,, 30	51	Tredegar	Monmouthshire	Tredegar Iron Company	John Hogan	Haulier	15	Was knocked down by horse and tram into the deepside gutter, and there suffocated in the mud.	–	–	–	1	–
Nov. 3	52	Bargoed	Glamorganshire	Bargoed Company Limited	Llewellyn Thomas	Collier	24	Fall of roof. This unfortunate man was repeatedly warned to secure himself by timber, but neglected to take the proper precautions.	–	1	–	–	–
,, 14	53	Risca	Monmouthshire	T. W. Rhodes	James Briffett	Collier	40	Fall of stone and coal from face injured him severely on the 14th, and he died the day following.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof and Coal.	In shafts.	Miscellaneous.	Above ground.
1865. Dec. 5	54	Van - -	Glamorganshire	Glamorganshire Iron and Coal Company.	Edward Rowland -	Collier -	23	Lost his life by inundation of water from ancient crop workings in those pitching measures.	–	–	–	1	–
„ 14	55	Hendredenny -	Glamorganshire	David & Sloper - -	John Morgan -	Collier -	29	A joint ran diagonally through the roof, and let down a heavy fall of stuff whilst he was at work.	–	1	–	–	–
„ 15	56	Glyn - -	Monmouthshire	Ebbw Vale Company -	Job Lovel - .	Roadman -	32	Between the "Rock vein coal" and its own rock top, a considerable quantity of stuff is sometimes interposed; this mass came down (nearly all the pit is squeezed) whilst Lovel was removing timber, and came so suddenly that he could not escape, but was covered by the fall, and so suffocated.	–	1	–	–	–
								Total deaths - -	26	34	10	11	1

List of Fatal Colliery Accidents—*continued.*

RECAPITULATION.

Total number of separate accidents reported in the year 1865 - - -	56
Total number of persons killed by those 56 separate accidents - - -	82

Whereof 26 deaths were occasioned by explosion of fire-damp.
,, 34 ,, ,, falls of coal and stone.
,, 10 ,, took place in pit shafts.
,, 11 ,, arose from miscellaneous causes underground.
,, 1 ,, occurred on the surface.

Total - 82 deaths, as enumerated and described in the List.

Comparative Table of the last Four Years.

In 1862, 2 persons lost their lives by explosion of fire-damp during the same year that the total number of deaths from all causes amounted to - - 60
,, 1863, 3 ,, ,, ,, ,, ,, 60
,, 1864, 6 ,, ,, ,, ,, ,, 67
,, 1865, 26 ,, ,, ,, ,, ,, 82

So that it will be seen that in four years the results have by no means improved, at all events in the district under my charge.

Lionel Brough,
Inspector of Coal Mines for the South-western
Division of Great Britain.

Non-fatal Colliery Accidents during the entire Year 1865.

Of these there occurred 96 in all, attended more or less with injury to the persons employed, in manner as tabulated below :—

12	accidents	by fire-damp,	whereby	21 men and boys were scorched by explosion, or contused, fractured, or otherwise injured by its expansive force.
44	,,	by falls of coal and stone,	,,	47 men and boys suffered from broken bones, or in other ways were wounded or hurt.
5	,,	in shafts,	,,	6 men and boys underwent fracture, or received some description of injury.
33	,,	from miscellaneous causes,	,,	35 men and boys experienced fracture, more or less, burning by gunpowder, or suffered from other causes of an equally grave and serious character.
2	,,	occurred on surface,	,,	2 men and boys were maimed or hurt in some manner or other.
96	accidents, altogether.			111 persons received more or less injury, and underwent more or less of consequent suffering.

All the 111 persons have since been restored in bodily health, or are now progressing towards recovery.

Lionel Brough,
Inspector of Coal Mines as aforesaid.

LIST of the FATAL ACCIDENTS in IRONSTONE MINES, and LOSS of LIFE arising therefrom, in the SOUTH-WESTERN DISTRICT of GREAT BRITAIN, during the Year ended the 31st Day of December 1865.

Date.	No. of Accidents.	Name of Colliery	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Fall of Roof.	In Shafts.	Miscellaneous.	Above-ground.
	1	Blaina - -	Monmouthshire	Levick and Simpson -	Griffith Roberts -	Miner -	22	By heavy fall of mine ground on the 24th he received such injuries as to cause death on the day now recorded.	–	1	–	–	–
Mar. 21	2	Blaenavon -	Monmouthshire	Blaenavon Iron Company	Evan Evans - -	Haulier -	13	In bringing a load out of a stall and leading the horse he slipped up, and the tram went over and killed him.	–	–	–	1	–
" "	3	Glyn - -	Monmouthshire	Ebbw Vale Company -	William James -	Miner -	25	Fall of mine ground whilst holing. He neglected to protect himself by the necessary setting up of timber, though warned to do so; the result was death.	–	1	–	–	–
June 3	4	Rhymney - -	Monmouthshire	Rhymney Iron Company -	Evan Evans -	Miner -	21	Working in the Nant Llesg pit in the red vein mine, he was killed by fall of top. The viewer inclines to the opinion that this accident does not come within the meaning of the Act of Parliament, but I myself think that all the strata from the millstone grit upwards are subjected to that legislative measure, therefore I fail not to record this death in my list.	–	1	–	–	–
" 28	5	Blaenavon -	Monmouthshire	Blaenavon Iron Company	William Davis -	Miner -	39	Killed by explosion of a shot.	–	–	–	1	–
July 15	6	Sirhowy - -	Monmouthshire	Ebbw Vale Company -	David Thomas -	Miner -	11	Injured by fall of stuff on the 14th, and lingered until to-day, when his sufferings ended.	–	1	–	–	–
" 28	7	Sirhowy - -	Monmouthshire	Ebbw Vale Company -	Rees Price - -	Miner -	21	Whilst sledging down the upper course of ironstone a scale of the roof fell and killed him before he could get away.	–	1	–	–	–

List of Fatal Ironstone Mine Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above-ground.
1865. Aug. 28	8	Glyn - -	Monmouthshire	Ebbw Vale Company -	Thomas England -	Miner -	18	He was engaged in loading a tram when the roof came down and deprived him of life.	–	1	–	–	–
Oct. 5	9	Tredegar - -	Monmouthshire	Tredegar Iron Company -	David Matthew -	Miner -	23	Whilst holing the ground, stone and stuff came down on him before they could get at him.	–	1	–	–	–
" "	10	Ebbw Vale -	Monmouthshire	Ebbw Vale Company -	Thomas Osmond -	Miner -	15	Killed by fall of roof in stall - -	–	1	–	–	–
" 11	11	Coalbrookvale -	Monmouthshire	Levick & Simpson - -	Richard Jenkins -	Hitcher -	29	Some stuff, probably from an ascending tram, fell on his head and killed him.	–	–	1	–	–
Nov. 6	12	Varteg - -	Monmouthshire	Partridge & Jones - -	James Orchard -	Miner -	30	Injured on the 4th by fall of stuff from face of workings, which pressed so severely on the region of the heart that he died on the 6th.	–	1	–	–	–
" 22	13	Blaenavon -	Monmouthshire	Blaenavon Iron Company	Henry Williams - James Williams -	Miner - Miner -	19 12	Killed by unexpected explosion of a shot, but this case will find mention in the body of my report.	–	–	–	2	–
								Total deaths - - - -	–	9	1	4	–

List of Fatal Ironstone Mine Accidents—*continued.*

RECAPITULATION.

Total number of separate accidents reported in the year 1865 - - - -	13
Total number of persons killed by those 13 separate accidents - - -	14

Whereof 9 deaths were occasioned by falls of roof, rubbish, and mine ground.
„ 1 „ took place in a pit shaft.
„ 4 „ resulted from miscellaneous causes.

Total - 14 deaths, as recorded in the above Fatal Accident List.

COMPARATIVE VIEW OF THE LAST FOUR YEARS.

In 1862, the total number killed in all the Ironstone Mines of the district amounted to	10
„ 1863, „ „ „ „ „ „	19
„ 1864, „ „ „ „ „ „	17
„ 1865, „ „ „ „ „ „	14

Note. The production of native Ironstone in 1865 is greater than has been recorded in the district for some years, therefore in 1865 the results of metal mining in the South-western Division is better as regards loss of life than has hitherto been previously known.

LIONEL BROUGH,
Inspector of the District.

NON-FATAL IRONSTONE MINING ACCIDENTS IN THE YEAR 1865.

These accidents were attended with injury to the persons employed in manner as tabulated underneath :—

9	accidents by falls of material,	whereby	10	persons were more or less wounded and hurt.
1	„ in a shaft,	„	6	„ „ „
8	„ by miscellaneous causes,	„	8	„ „ „
2	„ on surface,	„	2	„ „ „
20	accidents reported, whereby		26	persons were injured.

These I am glad to be able to state are either at work again, or are now progressing towards convalescence.

LIONEL BROUGH,
Inspector of Ironstone Mines as aforesaid.

Mr. Baker's Report.

REPORT on the INSPECTION of MINES in the SOUTH STAFFORDSHIRE and WORCESTERSHIRE DIVISION for the Year ended the 31st December, 1865.—BY JAMES PHILIP BAKER, Esq.

SIR, Wolverhampton, February 28, 1866.

ecreased
ss of life.

THE Report which I have the honour to present for the year ending the 31st December, 1865, exhibits a remarkable decrease in the loss of life in the coal and ironstone mines in this inspection district. The total number of lives lost in these mines in the year 1864 was 144, and the fatalities during the year 1865 were 96, showing a diminution of 48 deaths, 28 of which are due to the coal mines, and 20 to the ironstone mines. Such results are in the highest degree encouraging, especially when compared with the high death-rate exhibited in the official records of past years. That the loss of life has been greatly lessened during the operation of the Coal Mines Inspection Act the following comparisons will show:—

Annual average loss of life in coal mines in the first 10 years of colliery inspection to 1860, inclusive - - - -	162·5
Annual average of the last five years to 1865, inclusive - -	113·8
Lives lost in the year 1865 - - - - -	91

It is evident from the above statement that the object of the legislative enactments is being gradually realized, and that the provisions of the law are for the most part working satisfactorily. Such manifest results of the benefit of inspection will, it is to be hoped, encourage the proprietors and managers of mines to promote in every way the observance of the precautions laid down by the legislative authority, and also to adopt every means which experience may suggest for diminishing the risk of the collier's occupation.

on-fatal
juries.

During the past year no less than 240 men and boys have suffered more or less from injuries of various kinds, all of whom, for anything I know to the contrary, are restored to health, or are fast recovering.

From the confidential returns of the out-put of coal with which the colliery proprietors have kindly supplied me, I am enabled to state that the amount raised last year was equal to 10,201,500 statute tons, of 2,240 lbs., which includes the usual allowance coal to the colliers and the coal consumed on the collieries, &c.

The computed number of persons employed in coal mines in this district in 1865 is 27,000, raising 10,201,500 tons of coal. There were 79 separate fatal accidents, involving the loss of 91 lives. The result is that 341 persons were employed and 129,132 tons of coal raised per separate fatal accident; and 296 persons employed and 112,104 tons of coal raised per life lost. The number of collieries in the district now reach 542. These latter statistics and the figures supplied me from the other 11 inspection districts are compiled in one return, which is attached to the summaries appended to this report.

In the "lists" which I have the honour to transmit with this report it will be observed that the mortality in and about the coal mines of this inspection district was brought about by 79 separate fatal accidents which resulted in the deaths of 91 persons, many of whom have left widows and large families to mourn their untimely end. Eight were killed by explosions of fire-damp, 48 by falls in the mines, 22 in shafts, 9 from miscellaneous causes under ground, and 4 on the surface.

Amongst those who lost their lives there were, 1 colliery proprietor, 2 charter-masters, 2 deputies, 15 collier boys, 30 bandsmen, 25 pikemen, 2 banksmen, 5 sinkers, 3 enginemen, 2 labourers, and 4 hookers-on, 19 of whom lingered some time after the accidents, and then died at their own homes.

It is gratifying to be able to state that no fatal accident has happened from ropes and chains breaking, suffocation by gases, falling into water, on inclined planes, or by machinery under ground; nor has there been any loss of life by machinery on the surface, or boilers bursting. These happy results are perhaps to some extent due, so far as the surface is concerned, to frequent inspection of the winding machinery and tackle, to which a considerable portion of my time has been devoted. Such inspection, in a district where these appliances are so numerous, and on so varied a scale, is of paramount importance.

Explosions.

The fatal explosions were four less than last year; but in a district so comparatively free from fire-damp we ought to have but few, if any, to record; and this would really be the case if proper attention were paid and simple precautions taken.

Of the eight deaths which occurred during the year, three were found upon investigation to be of a purely accidental character, but the other five might have been prevented if ordinary care had been exercised.

Falls.

Decrease under this head.

For many years falls in the mines have been the crying evil in working the coal of this district. All the casualties from other causes put together have not produced so large an amount of mortality amongst the mining population, and for several years no appreciable diminution was effected. During the last three years, however, a decided decrease has taken place in this class of accidents. The annual average of deaths under this head in the first 10 years under inspection amounted to 96·5, whilst during the year 1865 only 48 men and boys were killed, being three less than the year previous. This source of loss of life is now coming within more reasonable dimensions, which affords much reason for gratitude and thankfulness. I fear, however, that such results cannot be maintained unless the suggestions offered in former reports, as to the mode of working, &c., &c., be carried further into effect; and I feel constrained to say that there yet remains abundant room for improvement in the method of timbering, and in the carrying on of our underground operations.

Of the 48 deaths 64½ per cent. took place in thick coal workings, and somewhere about 66 per cent. of the entire out-put of coal is wrought from these mines.

The most terrible accident which occurred during the year, No. 8 in the list, happened in thick coal workings, and it was certainly one of the most appalling and destructive in its character on record. The accident took place on the 9th of February at No. 10 pit in the Salt-well Colliery. On the morning in question whilst six poor fellows were engaged as loaders in one of the openings of the mine some 50 tons of coal suddenly fell *en masse* from a height of about 17½ feet, and without a moment's warning deprived them of life.

The fall was brought about by a subsidence of the superincumbent strata (technically called a "bump"). At the inquests which followed Mr. Matthew Fletcher, the ground-bailiff, stated that he had instructed the charter-master to confine himself to 8-yard openings, leaving 10-yard square pillars. The opening, however, in which the accident occurred was 12 yards wide at the bottom, which, as Mr. Fletcher observed, was "a "serious departure from his instructions, and seriously increased the danger of the men." Previous to the accident the coal had overhung a distance of about 24 feet from the side of the *rib*, and this had not been supported by props, the witnesses stating that it was impracticable to prop at so great a height. The charter-master's deputy had examined the overhanging coal with a *pike* to see if it was safe previous to the men commencing work on the morning of the day before that on which the accident took place, but not on the same morning, but the charter-master had got up to it with a ladder and said he considered it safe, and the colliers examined as witnesses expressed their perfect confidence in its security. It appeared that one of the men buried under the coal spoke after the accident, but was dead before he could be got out. The deputy, for fear of creating an uproar at the top, had not sent for a surgeon. My opinions as to the cause of the accident were stated in the following evidence before the coroner:—"I inspected No. 10 "pit in the Salt-wells Colliery on the day after the accident, and again on the 16th "inst., particularly examining the stall where the accident took place. I found that a "large mass of overhanging coal, about 50 tons, had fallen, partly from a face-slip and "partly from the roof, which extended from one side of the opening to the other, running "parallel with the structural divisions of the bed or face of the coal, thus favouring the "process of rating off consequent upon the superincumbent weight on the one hand, "and the upheaving of the bottom on the other, causing the coal to split into columnar "masses and roll off. The overhanging coal before the fall extended about 24 feet from "the side of the rib, and was about 5 feet in thickness and 17 feet 6 inches from the "floor of the mine, 9 or 10 feet of which broke off. The coal in question should, in "my opinion, have been got down. Overhanging coal, under any circumstances, "greatly increases the risk to life and limb in working '*thick coal seams*,' but especially "when a bump or subsidence of the strata occurs. Such parts of the mine generally "yield to the concussion and fall, while a flat or level roof and the sides of pillars are "but little affected. In this case there seems to have been a serious departure from the "plan of working laid down for this pit. The rule has been to work 8-yard openings "and 10-yard pillars, but the opening or stall in question measures about 12 yards at "the bottom, and about 11 yards at the top of the pillars. The structural divisions of "the coal appear to be extremely treacherous, consequently opening too wide should "be carefully avoided, as the stalls generally get a little wider by rating; therefore the "work should be set out at safe and reliable dimensions, and well supported with timber "props, where they can be fairly set to moderate heights. I believe it possible to prop "overhanging coal, even when it is 17 feet high."

At the first inquest the jury, after deliberating for about 20 minutes, returned a verdict of "Accidental death." They, however, made the following recommendations:— "That in future the openings in No. 10 pit do not exceed eight yards in width, that all "overhanging coal above the band be either got down or timbered, and it is the opinion "of the jury that this should have been done before the accident happened. That the "butty and doggy be cautioned as to the mode of examining the pit before the men "commence working; and the jury are of opinion that hitherto proper examinations "have not been made in the pit. That on any future occasion, when an accident "happens in a pit, it be at once communicated to the banksman, and the surgeon sent "for."

A similar verdict was returned at a second inquest on another portion of the sufferers.

It is but due to the memory of the charter-master, who is since dead, to say that he had worked the pit in question for 10 years without the loss of a single life.

No. 45 was another case of a fall of coal in an opening of unusual dimensions, and occurred at the Bourne Hill Colliery of Messrs. Nock. Two men were killed who were at work in the "thick coal," in a stall about 20 yards long by an average width of about 12 yards, the height from which the coal fell being about 7 yards. According to the evidence the fall took place from two converging joints or structural divisions in the roof, which were of a very treacherous character, and was caused by the occurrence of what the colliers call a "bump." In my opinion the safety of the men would have been consulted by leaving a small pillar in the *stall*, and I stated that view at the inquest, and also pointed out that the plan produced by the surveyor of the colliery showed that the working of the *stall* where the accident happened had not been carried on conformably to that of the adjoining stalls. Mr. Edwin Yardley, the surveyor of the colliery, and Mr. Henry Johnson, mine agent and surveyor, were of opinion that the opening or stall was not too wide, and that it would not have been practicable to have left a pillar large enough to give support.

The coroner in submitting the case to the jury observed that it would be for them to decide on whose evidence they most relied. If they were of opinion that there was not proper support for the roof, although they could not say there was culpable neglect, they might offer any suggestions as to precautions desirable to take for the future. If they relied on the evidence of Mr. Yardley and of Mr. Johnson, they would say that the Messrs. Nock were free from any blame whatever. The jury, which included some practical miners, returned the following verdict:—"We find a verdict of accidental death, and we "are of Mr. Baker's opinion that if a knob (small pillar) had been left in the stall the accident might have been prevented. We wish the proprietors to carry out the inspector's "suggestions. We consider the place to have been too wide without any support."

75 occurred at the Moor Lane Colliery. The deceased man was at work in a thick coal pit with the charter-master and some other workmen, when a mass of coal suddenly fell and crushed him to death. Evidence was given at the inquest that the place of work was safe, although it was admitted that all support had been taken away from one of the sides thereof, that the coal under which the men were actually working was entirely unsupported with timber, and that the accident would not have happened had it not been for a "*bump*." The jury, however, returned an open verdict. Having received your commands to promote a prosecution, proceedings have been commenced, but the case has not yet been heard.

Accidents Nos. 2, 6, 26, 49, 50, 51, 54, 63, 65, and 73, were all the sad result of disobedience to orders, improper mode of doing the work after instructions had been given to the contrary, or violation of the special rules, and in some cases insufficiency of timber. The other cases are all more or less of an accidental character, and therefore do not require special notice, as they are sufficiently explained in the list at the end of this report.

Shaft Accidents.

The number of lives lost in shafts is still too high. Twenty-two individuals were sacrificed, which, however, is considerably below last year's record, when the deaths reached 47. Nowhere in Great Britain can so large a number of pit shafts be found, which may in some measure perhaps account for this great waste of life, though it must be confessed that it does not redound to the credit of the district. Some of these fatalities might have been avoided; for instance, accidents Nos. 14, 48, and 68 would not have taken place if the safety-chain had been used. This simple precaution would, if adopted, save many lives.

Accident No. 11.

Whilst John Griffiths, the deputy, and a workman were descending the pit shaft the skip suddenly became detached from the foot-hook of the gin rope, precipitating them to the bottom. In this instance the accident must have arisen from the skip being suspended only on the point of the hook. Two distinct inquests were held on the sufferers, and the verdict in each case was "Accidental death," the juries stating that they were unanimously of opinion that Griffiths, the deputy, was alone to blame in first breaking the clasp of the *foot-hook*, and then allowing it to be used in that state. Judicious oversight on the part of such officials and better discipline would go far towards preventing such catastrophes. Such accidents as 19 and 24 would seldom, if ever, be heard of, if the mine owners could be prevailed upon to adopt the *permanent travelling fence*, to which I alluded in my last report, but I regret to have to state that they seem very reluctant to make this provision.

The permanent travelling fence.

In the case of accident 28, the deceased, after being frequently cautioned by his father, still persisted in working in an unwalled sinking pit-shaft, and thereby lost his life, the result of his own perversity and folly.

32. This frightful accident occurred at Bradley Colliery. The deceased and another workman, both sinkers, were ascending the pit-shaft, and in consequence of the engine-man drawing them too high they became alarmed and jumped out of the *bowk*, one grasped the wood conductor and was safely landed, but the other missed his hold, fell down the shaft, and was dismembered. At this pit the cage had been dispensed with in order to do some shaft repairs and other work in the pumping pit. A most ample and secure provision was made for landing purposes, which in this instance the *banksman* neglected to attend to, otherwise the man's life would have been saved. At your request I made a special report of this case, and afterwards received your instructions to institute proceedings against the banksman for his neglect of duty. The case was accordingly brought before Isaac Spooner, Esquire, stipendiary magistrate, who, after a long discussion on its merits, said that he felt compelled, though reluctantly, to say that he had no other alternative but to dismiss the charge, on the ground that a platform or landing stage with folding doors had been provided, instead of what is technically termed a *runner*, contrary to the special rule under which the charge was preferred; and whilst admitting the superiority of the former provision, he thought it would be dangerous to convict unless the *letter* of the law could be made to apply.

Accident 35; a boy was the victim in this case. He was about to descend, and on putting his foot into the bowk it suddenly fell from the hook of the rope. It was alleged at the inquest that the boy was in fault in not waiting for the tackle to be examined by the banksman, who, by-the-by, was attending to the gin instead of the pit-top. The result of the inquiry was, however, a verdict of "Accidental death." Subsequently the agent of the colliery summoned the banksman before the magistrates for a violation of the special rules, when he was fined 2*s*. 6*d*. and the costs.

In obedience to your instructions proceedings were also instituted against the charter-master for an infringement of the special rule, when a penalty of 2*l*. and the costs was imposed.

Penalty imposed.

Case 37 happened at the Cannock Chase Colliery, Uxbridge pits. It appeared that on the day in question the *hooker-on* left his post of duty and ascended the pit-shaft, and at the moment he began to descend, one of the workmen was at the bottom and got so badly crushed by the ascending cage that he died on the third day after its occurrence. The verdict at the inquest was one of "Accidental death," but the jury at the same time severely censured the hooker-on for leaving his post. He was afterwards brought up before the magistrates for his negligence and fined 1*l*. and the costs.

In the case of overwinding at the High Bridge Colliery, No. 38 in the list, the jury returned a verdict of "Manslaughter" against the engine-man, who awaits his trial at the ensuing March assizes.

Penalty imposed.

No. 40 happened to a hooker-on, who unnecessarily and wrongfully exposed himself in the bottom of the shaft whilst a full skip was ascending, when a piece of coal fell and killed him on the spot.

42 was an accident in which a youth was in the habit of amusing himself by grasping the foot-hook of the band-chain, and suffering himself to be raised to a certain height in the pit-shaft and then dropping to the bottom. In this instance he held until he was afraid to loose, and at last, unable to sustain his grasp, fell and was killed.

Accident No. 57 was a most unfortunate circumstance, occasioned by the charter-master's recklessness at the pit-top. Some timber props were required for the mine, and in order to save himself the trouble of pushing the waggon over the mouth of the pit-shaft, he preferred standing at a distance and pitching the timber into the skip as it hung suspended in the shaft. A piece of the timber missed the skip, fell down the shaft, and killed a boy in the inset at the bottom. The result of the coroner's inquiry was a verdict of "Manslaughter" against the charter-master, who now awaits his trial at the next Stafford assizes.

64 in the list was a somewhat mysterious case. On the day of the accident two sinkers were at work in a shaft in the Tipton Green Colliery, which communicated with an adjoining pit in which two other men were engaged. In the latter pit it was thought desirable as a precautionary measure to furnish these men with safety lamps (though no gas had been seen), nor was any expected up to the time of the explosion. However, from some cause an explosion occurred, and it is supposed, and I think with some degree of probability, that the concussion caused a brick to fall down the shaft of the adjoining pit from the mouth of the air-way, which struck the deceased. The men at work where the gas was fired stated that a fall took place in the workings near the shaft and caused the gas to rush unexpectedly towards them, and that the rush of air forced the flame through the gauze of the lamp. This statement, however, is, I believe, nothing more than an idle excuse for their tampering with the lamp, as one was afterwards found with the gauze off which they averred was unscrewed after the explosion. Moreover, it was evident from the state of one of the other lamps that an attempt had been made to pass the flame through the gauze for the purpose of smoking.

The last case of death under this head, No. 79, which seems to require special notice, took place at the Ward Colliery, at a pit at which a *patent* apparatus, invented by Mr. S. Bailey, to prevent overwinding, was attached to the band chain. On the day of the accident the cage was at the top of the shaft waiting for the usual signal to be lowered. At length the proper signal was given for a "boy," employed in the mine, to descend, and immediately the engine-man started his engine the wrong way, and pulled the band over the pulley, leaving the cage on the other side. From some unexplained cause the apparatus did not act properly. It had evidently thrust the cage askew, and the wire guides giving way doubtless caused the cage to miss the landing apparatus, and it was thus, with the boy, precipitated to the bottom. In this case the engine-man neglected to attend to the signal and also overwound the cage. The jury, however, returned a verdict of "Accidental death." Subsequently I had the honour to receive your instructions to institute proceedings against the engine-man for a violation of duty, which proceedings are still pending.

Miscellaneous.

There were nine deaths from miscellaneous causes. The worst of these, No. 10 in the list, happened at the Coneygree Colliery, whereby three lives were sacrificed by an irruption of water from the canal on the surface of the colliery. Some time before the accident an old pit-shaft had been discovered in the underground workings of the "thick coal," but its whereabouts was not visible on the surface, owing to the *débris* which had been accumulating there for years. I was afterwards informed by the contractor that a considerable number of old pit-shafts of various depths were filled up when the canal was first constructed, the positions of which are now unknown. The pit in question was also found filled up, but the working of the mine caused the contents of the old shaft to sink, and also the embankment of the canal above it, which at once exposed the orifice of the pit, into which the water rushed with fearful violence and drowned the three men. At the inquest James Brown, the charter-master, stated that he was informed of the discovery of the old shaft about a week before the accident. As, however, the finding of an old shaft was a common occurrence in that colliery he apprehended no danger, and did not inform the underground bailiff. Had he done so its position on the surface might have been ascertained and, possibly, precautions taken. The jury returned a verdict of "Accidental death," recommending, however, that the water from the arm of the canal above should be cut off during the continuance of the workings under this part of the colliery, which was done, and on the suggestion of the coroner also recommended that whenever an old shaft was discovered it should be at once reported to the colliery surveyor, and the workings suspended until he had inspected the place and pronounced it free from danger.

The other casualties under this head do not call for further notice than that given in the general list.

Above ground.

Of the four deaths above ground the only case which appears to require particular remark is No. 52, which was not only a lamentable but a very unusual cause of death. On the night of the accident one of the sinkers employed at the pit lay down upon the pit-bank, at the back of the pit-frame, and fell asleep. The engine-man drew a sinking-pit bowk over the pulley, which fell upon the sleeping man and killed him. In this case a verdict of manslaughter was returned against the engine-man, who awaits his trial at the next March assizes.

Convictions.

In the course of the year penalties have been imposed for violations of the law to the amount of 118*l.* 10*s.* 0*d.*, besides the costs of the proceedings. By your instructions a man named Preston, a charter-master, employed at the Rough Hills Colliery, was summoned for a violation of the special rules in not providing a permanent "tackled skip" and "cover" for lowering and raising persons. As a boy was being raised in one of the shafts, in the absence of these provisions, he was struck by something falling down the shaft, and seriously injured. The case was brought before Isaac Spooner, Esquire, stipendiary magistrate, and the defendant pleaded guilty. The owner of the colliery, however, coming forward and stating that he would pay the costs and make some provision for the injured lad, the bench thought that as the penalty was only 2*l.* it would be better to accept the owner's offer. The case was adjourned for a fortnight, at the end of which a satisfactory arrangement was made between the parties, therefore no penalty was imposed.

During the year several deaths have taken place which are not recorded in the general list of accidents of *persons* not employed on or about the collieries of this district.

The first of these cases was that of a policeman, who it appeared going too near the mouth of a pit-shaft at work at the Bromford Colliery, during the night of the 20th of May, accidentally fell to the bottom. The travelling fence already alluded to in this and my previous report would undoubtedly have prevented this accident.

Another of these cases happened on Sunday the 1st of October. Several boys were playing and amusing themselves at the Darlaston Green Colliery by riding inside the "wheel" of a gin which was being pushed round by their companions, when one of their number raised his head above the wheel, and it coming in contact with the "gin beam," he received injuries which caused his death.

The third death was that of a man who, whilst descending a shaft at the Grace Mary Colliery, October 11th, died from natural causes, or, as the coroner's jury returned, by "the Visitation of God."

The last of these cases I have to notice occurred at the Old Hall Colliery, near Bewdley, on the 10th of November. A Mrs. Broome was in the habit of going to the winding-engine of the colliery and holding conversation with the engine-man, who it was proved was inside the engine-house on the day in question, when she was struck by the fly-wheel of the engine and killed on the spot. The fly-wheel was unfenced, contrary to the provisions of the law. Having received your authority to take proceedings against the owner, the necessary steps have been taken, but the case has not yet come on for hearing.

Ironstone mines.

During the past year only five deaths have occurred in the ironstone mines of this district, all of which are under inspection. The first case in the "list" happened to a boy employed above ground, who it appeared was unfortunately knocked into the pit-shaft by one of the "bank horses." In No. 2 the deceased was crushed by the cage at the bottom of the pit-shaft, in one of the pits in the Deepmoor Colliery. In this instance it was evident that the deputy had been guilty of a dereliction of duty, and on your authority he was summoned before the magistrates for the offence and fined 5*s.* and the costs. The remaining three cases were of an accidental character.

Penalty imposed.

Education.

With regard to the clauses of the Coal Mines Inspection Act, which came into operation in July 1861, prohibiting the employment in mines of boys under 12 years of age, except under restrictions enforcing a certain amount of instruction at school, my experience has scarcely confirmed even my moderate anticipations of the beneficial operation of these legislative provisions for promoting the education of the children of miners. I fear, as I have stated in former reports, that so long as admission to *other trades* in the district is freely open to children at an early age, the clauses in question will mainly operate to divert juvenile labour into other channels. Probably no class of workmen is so ill educated as miners, whilst scarcely any class, from the peculiarly hazardous nature of their employment, need education more. Legislation on the subject, to be effectual, must, I think, be of universal application.

I have, &c.
James P. Baker,
Inspector of Mines.

To the Right Hon. Sir George Grey, Bart.,
Her Majesty's Principal Secretary of State for
the Home Department.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS of LIFE arising therefrom, in the SOUTH STAFFORDSHIRE and WORCESTERSHIRE DISTRICT, during the Year ending 31st December 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost. Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865. Jan. 2	1	Reed's Wood	Walsall	J. Glover	John Glover	Proprietor	—	Fall of earth in open work	–	–	–	–	1	1
„ 18	2	Princes End	Tipton	Earl of Dudley	T. Harris	Bandsman	19	Fall of coal from the roof in "thick coal," occasioned by reckless working.	–	1	–	–	–	1
„ 26	3	Ettingshall Lodge.	Bilston	Ettingshall Lodge Colliery Company.	J. Levine	Timber setter	22	Injured by a fall of roof whilst in the act of setting timber, on the 24th, died this day.	–	1	–	–	–	1
„ „	4	Bromford	West Bromwich	W. H. Dawes	M. Williams	Bandsman	46	A large piece of coal rolled over and crushed the deceased against a pillar.	–	–	–	1	–	1
Feb. 3	5	Hall Bridge	Tipton	H. Haines	J. Street	Ditto	18	Fall of coal and rock from the "roof" thick-coal pit (accidental).	–	1	–	–	–	1
„ „	6	Herbert's Park	Darlaston	D. Jones	J. Darnall	Pikeman	37	Fall of coal in "bottom coal;" had neglected to sprag the coal whilst holing.	–	1	–	–	–	1
„ 4	7	Goscote Hall	Walsall	G. B. Cale and Co.	Thos. Moat	Bandsman	44	Fall of roof rock in bottom coal, caused by two slips not previously seen.	–	1	–	–	–	1
„ 9	8	Salt Well	Dudley	Earl of Dudley	E. Johnson	Ditto	18	Heavy fall of overhanging coal in "thick-coal" pit, about 50 tons. (*See* Report.)	–	6	–	–	–	6
					W. Mason	Ditto	30							
					E. Roberts	Ditto	36							
					J. Smith	Ditto	18							
					J. Rough	Ditto	31							
					R. Pikey	Ditto	27							
„ „	9	Bearmoor	Corngreaves	New British Iron Company	J. Mattox	Pikeman	38	Fall of coal in thick coal	–	1	–	–	–	1
„ 10	10	Coneygre	Tipton	Earl of Dudley	D. Wharton	Ditto	47	Inundation of water from the canal, which broke into an old shaft, the position of which was unknown on the surface of the colliery.	–	–	–	3	–	3
					J. Wharton	Ditto	45							
					J. Wharton	Collier	16							
								Carried forward	–	12	–	4	1	17

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
								Brought forward -	–	12	–	4	1	17
1865. Feb. 14	11	Amblecote -	Stourbridge -	Hill and Allchurch -	J. Griffiths - J. Allchurch -	Deputy - - -	— —	Fell part way down pit shaft. The skip became detached from the foot-hook of the gin rope.	–	–	2	-	–	2
„ 17	12	Groveland -	Tipton -	J. Bagnall and Sons -	T. Baker -	Collier	14	Crushed upon underground incline whilst improperly riding upon the skip.	–	–	–	1	–	1
„ „	13	Barn Farm -	Bilston -	Messrs. Williams -	J. Jukes, son of the butty.	Bandsman -	18.	Fall of coal in "new mine" and fire-clay coal.	–	1	–	–	–	1
„ 21	14	Shut End -	Kingswinford -	W. O. Foster -	J. Price -	Collier -	13	Fell out of the skip whilst descending	–	–	1	–	–	1
„ 25	15	Bournehill -	Rowley Regis -	Nock and Company -	W. Scott -	Ditto -	—	Accidental fall of coal in thick-coal "rib and pillar" pit from a slip in the roof.	–	1	–	–	–	1
Mar. 9	16	Dacey Hill -	Dudley -	Skelding and Edwards -	H. Luskin -	Bandsman -	21	Accidental fall of coal in "thick coal" caused by two slips.	–	1	–	–	–	1
„ 12	17	Foxyards -	Tipton -	Creswell and Sons -	W. Rhodes -	Ditto -	—	Fall of roof in a "thick-coal" gate road; injured on the 10th instant, died this day.	–	1	–	–	–	1
„ 15	18	Shut End New	Dudley -	Exors. of A. B. Cochrane	A. Ball -	Ditto -	36	Fall of coal in "thick coal" on the 4th; died this day.	–	1	–	–	–	1
„ „	19	Goscote -	Walsall -	J. C. Smith -	J. Follows -	Banksman -	56	Pushed the *skip* into the pit-shaft and followed it.	–	–	1	–	–	1
„ „	20	Parkfield -	Bilston -	Parkfield Company -	W. Lawrence -	Deputy -	43	Injured by fall of new mine coal, died during the day at his own home.	–	1	–	–	–	1
„ 31	21	LaneHeadBridge	Walsall -	J. Hawkins -	J. Davies -	Pikeman -	20	Premature explosion of shot -	–	–	–	1	–	1
April 2	22	Brereton -	Rugeley -	Earl of Shrewsbury -	J. Abowne -	Collier -	14	Explosion of fire-damp on the 23rd ult., died this day; the result of his own carelessness.	1	–	–	–	–	1
„ 8	23	Churchfield -	Bilston -	Williams, Brothers -	C. Garreton -	Pikeman -	38	A sudden fall of coals whilst the deceased was trying to throw the coal down (in new mine).	–	1	–	–	–	1
„ „	24	Corbyn's Bank-	Dudley -	R. Mills and Company -	W. Meredith -	Banksman -	—	Fell into pit shaft whilst engaged at the top thereof.	–	–	1	–	–	1
								Carried forward -	1	19	5	6	1	32

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865.								Brought forward -	1	19	5	6	1	32
April 10	25	Withymoor -	Dudley - -	W. H. Dawes - -	J. Guest - -	Bandsman -	29	Fall of coal in gate road in "thick-coal pit," *bottom* workings, caused by a bump.	–	1	–	–	–	1
" 21	—	Lane Head Bridge.	Walsall - -	J. Hawkins - - -	J. Clibbery - -	Pikeman -	—	Premature explosion of shot, injured by accident No. 21, on the 31st ult.; died this day.	–	–	–	1	–	1
" 22	26	Fulwood's End	Bilston - -	Messrs. Turley - -	S. Clamp - - T. Fellows -	Bandsman - Ditto -	40 20	Fall of coal in thick coal, rib and pillar pit (from a slip, probably the result of an insufficiency of timber).	–	2	–	–	–	2
" 26	27	Lower Coneygre	Tipton - -	Earl of Dudley - -	W. Skeldon - -	Pikeman -	50	Smothered in a gate road whilst removing timber.	–	–	–	1	–	1
" "	28	Barcroft - -	Willenhall -	I. Hill - - - -	G. Cadman - -	Sinker -	24	Smothered in a sinking-pit shaft 5 yards deep.	–	–	–	1	–	1
" "	29	Cannock Chase	Walsall - -	Cannock Chase Colliery Company.	J. Dewsbury- -	Pikeman -	21	Explosion of fire-damp on the 8th instant; died this day.	1	–	–	–	–	1
May 6	—	Ditto - -	Near Walsall -	Cannock Chase Colliery Company.	R. Dewsbury -	Ditto -	19	Injured by accident, No. 29; died this day.	1	–	–	–	–	1
" 18	30	Level Mill -	Near Brierley Hill	Messrs. Hall, Holcroft, &Co.	J. Blakeway - -	Collier -	15	Fall of coal in thick coal - -	–	1	–	–	–	1
" "	31	Holt - -	Rowley Regis -	S. Bennitt - - -	M. Skeldon - -	Pikeman -	—	Fall of coal in thick coal, *top* working	–	1	–	–	–	1
" 21	32	Bradley - -	Bilston - -	J. Bagnall and Sons -	J. Jones - -	Sinker -	41	Fell down pit-shaft caused by overwinding.	–	–	1	–	–	1
" 23	33	Newbury Lane-	Oldbury - -	R. Haines - - -	D. Williams - -	Collier -	14	Fall of coal in thick coal - -	–	1	–	–	–	1
" 30	34	Himley - -	Himley - -	Earl of Dudley - -	J. Marsh - -	Ditto -	13	Explosion of fire-damp - - -	1	–	–	–	–	1
July 17	35	Horseley -	Tipton - -	Bedford and Company -	J. Bailey - -	Ditto -	13	Fell down pit-shaft on the instant he put his foot into the bowk to descend.	–	–	1	–	–	1
" "	36	Brierley - -	Bilston - -	J. Yardley - - -	T. Williams - -	Pikeman -	23	Explosion of fire-damp on the 10th inst.; died this day.	1	–	–	–	–	1
" 18	37	Cannock Chase	Walsall - -	Cannock Chase Colliery Company.	R. Carnall - -	Hooker-on -	—	Crushed by cage at bottom of pit-shaft; injured on the 15th, died this day.	–	–	–	1	–	1
								Carried forward - -	5	25	7	10	1	48

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
								Brought forward -	5	25	7	10	1	48
1865. July 22	38	High Bridge -	Brownhills, near Walsall.	W. Harrison - - - -	T. Clarke - -	Labourer -	13	Overwinding - - - -	–	–	1	–	–	1
„ 26	39	Willingsworth -	Bilston - -	J. & H. Haines - -	G. Price - -	Bandsman -	60	Fall of roof in new mine coal - -	–	1	–	–	–	1
„ 27	40	Foxyards -	Tipton - -	A. Colbourn - - -	J. Webb - -	Hooker-on -	—	Struck by a piece of coal which fell from an ascending skip whilst he was wrongfully standing in the bottom.	–	–	1	–	–	1
Aug. 3	41	Ettingshall -	Bilston - -	H. Hill - - - -	J. Walters - -	Charter-master.	55	Fell into pit shaft whilst landing a skip. Caused by the pulley frame breaking.	–	–	1	–	–	1
„ 5	42	Darlaston Green	Darlaston - -	New British Iron Co. -	R. Legge - -	Hooker-on -	—	Fell from the main-hook of the band chain, which he had grasped, and was thus improperly ascending the shaft for his own amusement.	–	–	1	–	–	1
„ „	43	Hockley -	Near Tipton -	B. Johnson - - -	A. Smith - -	Banksman -	—	A piece of coal accidentally rolled against his head and crushed it on the 4th inst.; died this day.	–	–	–	1	–	1
„ 6	44	Horseley -	Ditto - -	Horseley Colliery Co. -	E. Westwood -	Collier -	13	Accidental explosion of fire-damp on the 5th inst.; died this day.	1	–	–	–	–	1
„ 16	45	Bournehill -	Rowley Regis -	Messrs. Nock - - -	J. Parsons - H. White - -	Bandsman - Ditto -	— —	Fall of coal from the roof of a coal about 7 yards high in "thick-stall pit."	–	2	–	–	–	2
„ 22	46	Salt Well -	Dudley - -	Earl of Dudley - -	W. Wilden - -	Ditto -	20	Fall of coal in thick coal - -	–	1	–	–	–	1
„ 23	47	Withymore -	Rowley Regis -	W. H. Dawes - - -	J. Dingle - -	Ditto -	19	A fall of patchels in *lower* thick-coal workings, in "bolt hole."	–	1	–	–	–	1
„ 30	48	New Invention-	Near Walsall -	J. Brewer - - -	J. Williams - -	Pikeman -	—	Fell out of the "tackled skip" whilst ascending pit-shaft with two other workmen.	–	–	1	–	–	1
Sept. 5	49	Rookery - -	Bilston - -	G. B. Bloomer - -	J. Langston - -	Ditto -	22	Fall of coal in the new mine coal from between two slips. Deceased had neglected to sprag with timber.	–	1	–	–	–	1
„ 11	50	Horseley -	Tipton - -	Horseley Colliery Co. -	J. Morris - -	Ditto -	50	Fall of coal in "brooch coal." Deceased had neglected to sprag or spurn whilst holing.	–	1	–	–	–	1
								Carried forward -	6	32	12	11	1	62

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost. Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865.								Brought forward -	6	32	12	11	1	62
Sept. 15	51	Deepfield -	Bilston - -	Earl of Dudley - -	J. Hughes - -	Pikeman -	24	Fall of coal in "thick coal" whilst engaged improperly under the overhanging coal; injured on the 25th ult., died this day.	–	1	–	–	–	1
" 18	52	Prior Field -	Ditto - -	H. B. Whitehouse -	J. Harper -	Sinker -	31	Whilst deceased was sleeping upon the pit bank the engineman drew the bowk over the pulley, which fell upon the unfortunate man and killed him on the spot.	–	–	–	–	1	1
" 19	53	Fish - -	Brierley Hill -	J. Raybould - - -	T. Hobbs - -	Pikeman -	28	Fall of coal and shale whilst holing in a brooch coal pit on the 21st June last, died this day.	–	1	–	–	–	1
" 28	54	Wall End -	Bloxwich -	R. Thomas - -	J. Towers - -	Ditto -	—	Fall of roof in the "waste" of a bottom coal pit, brought about by his own neglect.	–	1	–	–	–	1
Oct. 4	55	Foxyards -	Tipton - -	Earl of Dudley - -	J. Hampton -	Hooker-on -	18	Struck by a piece of brick which broke off the walling of the shaft.	–	–	1	–	–	1
" 7	56	Tipton Moat -	Ditto - -	Tipton Moat Colliery Company.	J. Rogers - -	Pikeman -	—	Fall of coal in a "thick coal," rib and pillar pit gate-road; injured on the 8th ult., died this day.	–	1	–	–	–	1
" "	57	Barbor's Field -	Bilston - -	H. Fowler & Co. -	W. Ford - -	Collier -	14	Struck by a piece of timber which the charter-master wrongfully threw into the skip whilst the waggon was off the pit-mouth.	–	1	–	–	–	1
	58	White Heath -	Rowley Regis -	Price and Latham -	J. Tonks - -	Bandsman -	40	Fall of coal off the side of a heathen coal gate-road; injured on the 19th ult., died this day.	–	–	–	1	–	1
" 17	59	Cam Hay -	Near Walsall -	J. Brayford - - -	W. Grice -	Charter-master.	—	Fall of roof rock in 4-foot coal pit.	–	1	–	–	–	1
								Carried forward -	6	38	13	12	2	71

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865.								Brought forward -	6	38	13	12	2	71
Oct. 18	60	Dunkirk -	West Bromwich	P. Williams and Co. -	J. Horton - -	Engineman	—	Fell off a *ladder* whilst driving a wedge into the blocking of the crank of the fly-wheel shaft; injured on the 17th, died this day.	–	–	–	–	1	1
„ 22	61	Gawn Colliery	Rowley Regis -	W. Mills - - -	H. Parkes - -	Labourer -	50	Fell over the fencing into the pit shaft.	–	–	1	–	–	1
„ „	62	Stowe Heath -	Wolverhampton	W. and J. Sparrow -	T. Green - -	Engineman	36	Fell out of the "horse" whilst ascending pumping-pit shaft.	–	–	1	–	–	1
„ 25	63	Tansey Green -	Near Dudley -	Woodall and Co. - -	H. Heathcock -	Pikeman -	24	Fall of a piece of sawyer in "thick coal," brought about by his own disobedience to orders, and improper mode of getting the coal down; injured on the 14th inst., died this day.	–	1	–	–	–	1
„ 26	64	Tipton Green -	Tipton - -	Willetts and Hammond -	S. Weigh - -	Sinker -	22	Struck by a brick which fell out of the mouth of an air-way, supposed to have been dislodged by the blast from an explosion of fire-damp in the adjoining pit.	–	–	1	–	–	1
Nov. 2	65	Green Lane -	Walsall - -	J. Highway - - -	W. Phillips - -	Pikeman -	—	Fall of "roof rock" in a "waste" in the gob of a yard-coal pit, brought about by deceased himself whilst improperly knocking a timber prop out.	–	1	–	–	–	1
„ 3	66	Cotsal - -	Corngreaves -	New British Iron and Coal Company.	J. Shepherd -	Bandsman -	35	Fall of coal in thick coal on the 27th ult., died this day. The coal fell from between two slips or joints in *lower* working.	–	1	–	–	–	1
„ 9	67	Prince of Wales	Dudley - -	Taylor and Davies -	J. Hardwick -	Pikeman -	—	Explosion of fire-damp on the 30th ult., died this day.	1	–	–	–	–	1
								Carried forward -	7	41	16	12	3	79

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
								Brought forward -	7	41	16	12	3	79
1865. Nov. 10	68	Rectory - -	Kingswinford -	Hall, Holcroft, and Pearson	G. Robinson -	Collier -	13	Fell out of skip (whilst ascending with several others), the result of his own carelessness.	–	–	1	–	–	1
„ 15	69	Shut-End New	Dudley - -	Messrs. Cochrane -	T. Mantle - -	Ditto -	13	Fall of coal in "thick coal" which accidentally fell off the face from a slip.	–	1	–	–	–	1
„ 22	70	Albert - -	Wednesbury -	D. Rose - - -	J. Fellows - -	Engineman	60	Struck by some bricks which fell off engine-boiler stack during a gale.	–	–	–	–	1	1
„ 27	71	New Bearmoor	Corngreaves -	New British Iron Company	E. Baker - -	Pikeman -	40	Fall of clod and rock in thick-coal measures in gate-road.	–	1	–	–	–	1
„ 30	72	Blakeley Wood	West Bromwich	J. Bagnall and Sons -	J. Davies - -	Ditto -	41	Fall of coal in "new mine" whilst in the act of removing the sprags.	–	1	–	–	–	1
Dec. 1	73	Salt Well -	Dudley - -	Earl of Dudley - -	A. Proctor - -	Ditto -	22	Fall of Brazils in thick coal whilst cutting, brought about by an improper removal of timber props.	–	1	–	–	–	1
„ 6	74	Albion -	Willenhall -	Harper and Co. - -	W. Bond - -	Ditto -	30	Accidental fall of roof in new-mine coal whilst cutting in roof coal, which struck him down before he could get out of the way.	–	1	–	–	–	1
„ 13	75	Moor Lane -	Brierley Hill -	Thomas Crew - -	E. Beecham -	Bandsman -	54	Fall of "fine coal" in thick-coal rib and pillar pit. No timber used at all in this case.	–	1	–	–	–	1
„ „	76	Willenhall Road	Wolverhampton	James Edge and Co. -	J. Robarts - -	Pikeman -	61	Fall of coal (fire-clay holers); injured on the 30th ultimo, died this day.	–	1	–	–	–	1
„ 15	77	Cannock Chase	Walsall - -	Cannock Chase Colliery Company.	P. Sherridan -	Bandsman -	—	Accidental explosion of fire-damp on the 29th ultimo, died this day.	1	–	–	–	–	1
„ 16	78	Moseley Hole -	Willenhall -	Chillington Company -	W. Bowen - -	Sinker -	57	A new biatt or beam of timber which supported the scaffold gave way and precipitated him down a sinking-pit shaft, a distance of about 9 yards.	–	–	1	–	–	1
„ 29	79	Ward - -	Near Walsall -	Ward Colliery Company -	J. Passant - -	Horse driver	16	Fell down pit-shaft (*See* Report) -	–	–	1	–	–	1
								Total - - - -	8	48	19	12	4	91

List of the Fatal Accidents and Loss of Life in Ironstone Mines in the South Staffordshire and Worcestershire District, during the Year ending 31st December 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Ironstone and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865. May 13	1	Salt-well -	Near Dudley -	Earl of Dudley - -	J. Roberts - -	Pike-carrier	13	The bank horse accidentally knocked him into the pit-shaft.	–	–	1	–	–	1
,, 23	2	Deepmoor -	Walsall - -	Jno. Bagnall and Sons -	C. Henshaw - -	Miner -	16	Crushed by the cage at the bottom of the pit-shaft.	–	–	1	–	–	1
Aug. 2	3	Prior Field -	Bilston - -	H. B. Whitehouse - -	D. Timmins - -	Banksman -	58	Fell down pit-shaft, chain broke and snatched him into the pit whilst landing a full skip.	–	–	1	–	–	1
,, 20	4	Willenhall -	Willenhall -	Osier Bed Iron Company	E. Holcroft - -	Pikeman -	45	Fall of roof on the 11th instant, died this day.	–	1	–	–	–	1
Nov. 24	5	Hitchens -	Bilston - -	Messrs. Groucutt - -	G. Broom - -	Miner -	15	Accidental fall of ironstone measures from a slip.	–	1	–	–	–	1
									–	2	3	–	–	5

Mr. Wales' Report.

REPORT on the WORKING of the MINES INSPECTION ACT (23 & 24 Vict. c. 151.) for the SOUTH WALES DISTRICT, for the Year ended 31st December 1865.—By THOMAS E. WALES, Esq.

SIR, Swansea, 28th February 1866.

As inspector of mines, I have the honour to transmit herewith my annual report on the working of the Acts of Parliament for the Regulation and Inspection of Coal and Ironstone Mines in the South Wales District for the year ended December 31st 1865.

The number of fatal accidents and loss of life is, I regret to say, much in excess of the preceding year:—

Total lives lost in 1864 - - - - - - -	104
Ditto ditto 1865 - - - - - - -	159
Increase in the year 1865 - - - - - -	55

The time, when, and way in which these 159 deaths have taken place will be seen from the following monthly statement:—

MONTHLY STATEMENT of DEATHS caused by ACCIDENTS in the COAL MINES of the SOUTH WALES DISTRICT in the year 1865.

—	Explosions.	Falls of Coal.	Falls of Stone.	In Shafts.	Suffocation.	Miscellaneous, Underground.	On surface.		TOTAL.
							Machinery.	Miscellaneous.	
January - - - -	—	—	2	2	1	2	—	1	8
February - - - -	4	—	3	1	—	3	—	1	12
March - - - -	—	3	9	2	—	3	—	—	17
April - - - -	—	—	2	3	—	3	—	2	10
May - - - -	6	3	4	1	—	1	1	1	17
June - - - -	—	3	4	1	—	—	1	—	9
July - - - -	—	—	6	1	—	4	—	—	11
August - - - -	—	—	3	2	—	2	1	1	9
September - - -	—	1	2	3	1	3	—	1	11
October - - - -	—	3	3	—	—	5	—	—	11
November - - -	—	2	—	—	—	—	—	—	2
December - - -	35	—	4	1	—	1	—	1	42
Total - - -	45	15	42	17	2	27	3	8	159

And the annexed tabular form will show the per-centage of fatal accidents and persons killed, the quantity of coal raised per each fatal accident, and quantity of coal raised for each life lost:—

Computed number of persons employed in 1865 - - -	29,076
Quantity of coal raised in tons in 1865 - - - -	8,531,336
Number of separate fatal accidents - - - -	118
Number of lives lost by ditto - - - -	159
Persons employed per separate fatal accident - - -	246
Persons employed per life lost - - - - -	182
Tons of coal raised per separate fatal accident - - -	72,299
Tons of coal raised per life lost - - - - -	53,656

Six fatal explosions of fire-damp have occurred during the year, resulting in the death of no less than 45 persons.

I have descended the collieries and made careful examinations of the districts where and the circumstances under which each explosion occurred.

The first, resulting in the loss of four lives, took place on the morning of Friday, February 17th, in a part of the Bute Merthyr Colliery, Rhondda Valley, belonging to the trustees of the Marquis of Bute. On the following day I descended the pit and examined the district where it occurred. The general ventilation of the colliery I found satisfactory, but the ventilation of the district in which the explosion occurred was in my opinion most defective. The vein of coal worked in this pit is known as the "Four Feet Coal," and is proverbial for the large quantity of gas it gives off. It is worked with locked safety-lamps, but I am sorry to add that the dangerous practice of firing shots was and I believe is still allowed. The place in which the explosion occurred was for a considerable distance single, and was ventilated by the air passing through upwards of 150 yards of wooden boxes of very contracted area, and as a matter of course the quantity of air reaching the face was very small indeed, not more than 600 to 700 cubic feet per minute. Only five persons were engaged in driving this place, all of whom were supplied with safety-lamps, but shots were fired, and that duty was entrusted to one of the deceased, named John Middleton, a collier. From the evidence at the inquest it appeared a shot had been fired by him, and the force of the exploded powder blew a piece of burning paper near the roof of the mine and ignited a small quantity of gas which was lodged there, and hence the sad result, the loss of four lives.

The system of passing the air through wooden boxes is a dangerous one, and one I am happy to say is not now often resorted to in this district. The plan adopted here of allowing the workmen to fire their own shots where safety-lamps are used is fraught with much danger, and ought not to be permitted.

John Middleton was paid by piecework, so that there was every inducement for him not to make a proper examination of the place, to see if it was free from gas, before firing the shot, such work being extra. Had he examined the place doubtless he would have detected the presence of gas, and thus have prevented the explosion which caused the loss of life. The man who left the place the previous shift informed John Middleton that there was gas at the top near the face, and proper steps should have been taken for its safe removal.

The allowing of this gas to remain was in my opinion a breach of the first general rule of the Coal Mines Inspection Act, and with your permission proceedings were instituted against the colliery manager, Mr. Frater.

The case was heard at Pontypridd by the Rev. G. Williams and G. Williams, Esq., and by them dismissed; the latter gentleman at that time being an owner of collieries in the adjoining valley.

The second fatal explosion occurred on the morning of May the 19th, in the Vochriw pit, belonging to the Dowlais Iron Company, resulting in the death of a boy aged 15 years, and serious injury to several other persons. The fireman, whose duty it was to examine all working places before the workmen entered them, discovered gas in a certain stall on the morning in question, and, as was his duty, put up a proper danger signal to bar the entrance thereto, which signal is well understood, but which was totally disregarded and passed by a man of the name of   with a naked light. This fired the gas, and caused the loss of one life, and serious injury to 12 or 13 others. I have seldom met with such a thorough disregard to safety as was displayed by this person (on this occasion), who was also most severely burnt. This pit is worked with candles or naked lights.

The third explosion occurred on Saturday, May 20th, in the Cwmaman pit, Aberdare Valley, the property of Messrs. Shepherd and Evans, and also resulted in the loss of one life. This pit is worked with locked safety-lamps. On examination of the district in which it occurred I ascertained that a blower (a large and sudden discharge of gas) had been met with some weeks previously in one of the stalls. It appears this blower continued to give off gas copiously up to the morning in question, and against all mining experience the gas was allowed to mix with the air passing and ventilating the travelling roads and working places. On the morning in question the deceased, a boy 15 years of age, was going hurriedly up the cross-heading, and past the stall, and out of which this gas was escaping. The gas ignited at his lamp (a "Davy"), although found locked and in proper condition.

The deceased survived the accident one day, and stated that the gas fired at his lamp.

This is the only clear case which has come under my notice where gas has been ignited by a proper safety-lamp, and goes to prove the great danger of allowing men either to work or pass, even with safety-lamps, where it is known the air is charged with gas.

On meeting with the "blower," proper provision ought at once to have been made for the escape of the gas, without mixing with the air ventilating the travelling roads and working places. Had this been done doubtless the explosion would have been prevented, and it is due to state that arrangements were being made for adopting such a plan of ventilation; but I consider there was great negligence in not either having it done before

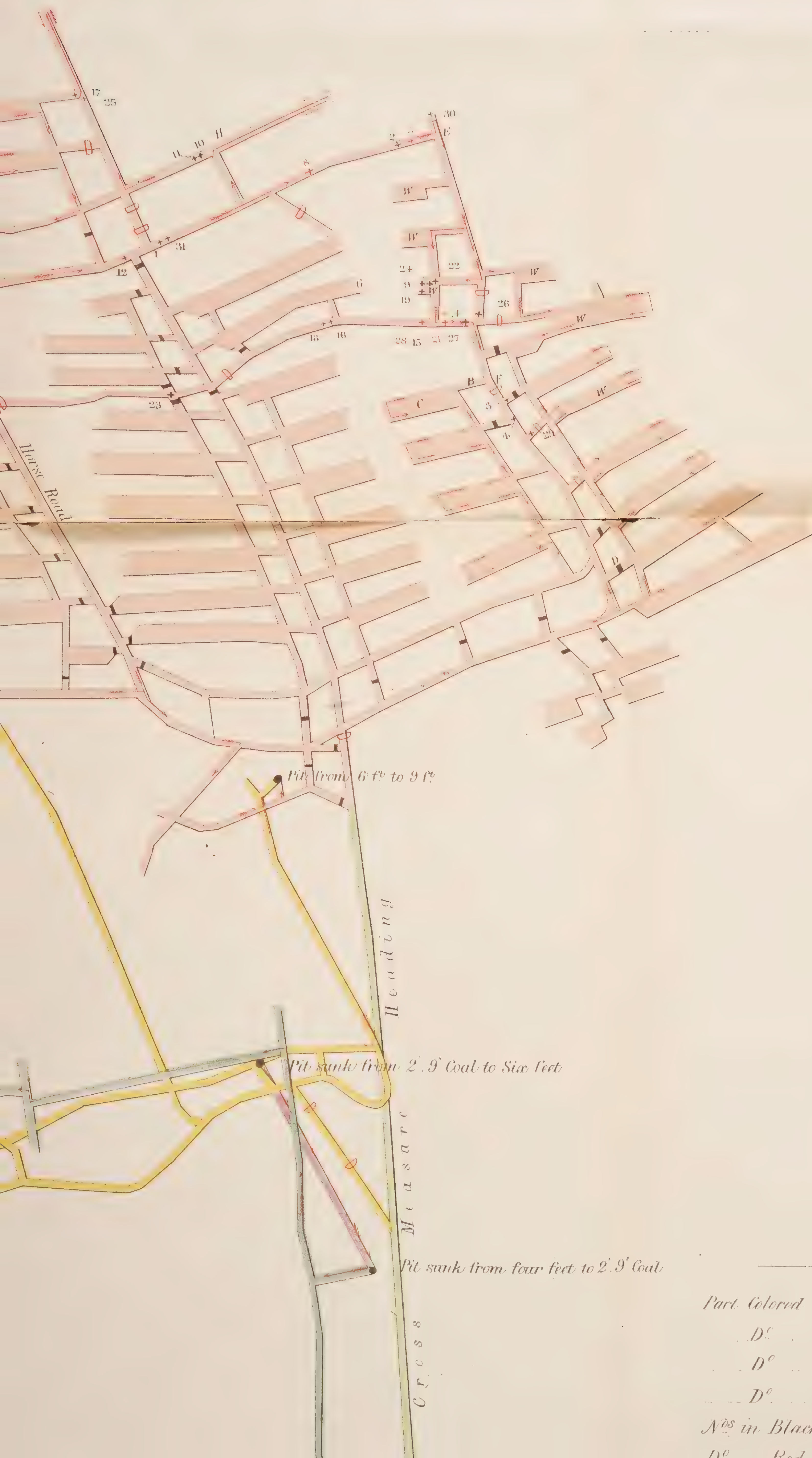
PLAN OF WORKINGS

IN THE NINE FEET SEAM, ETC.

AT THE

GETHIN, Nº 2, PIT,

WHEN THE EXPLOSION OCCURRED ON THE 20TH DECR. 1865.



17
25
11
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H
2
30
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24
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19
22
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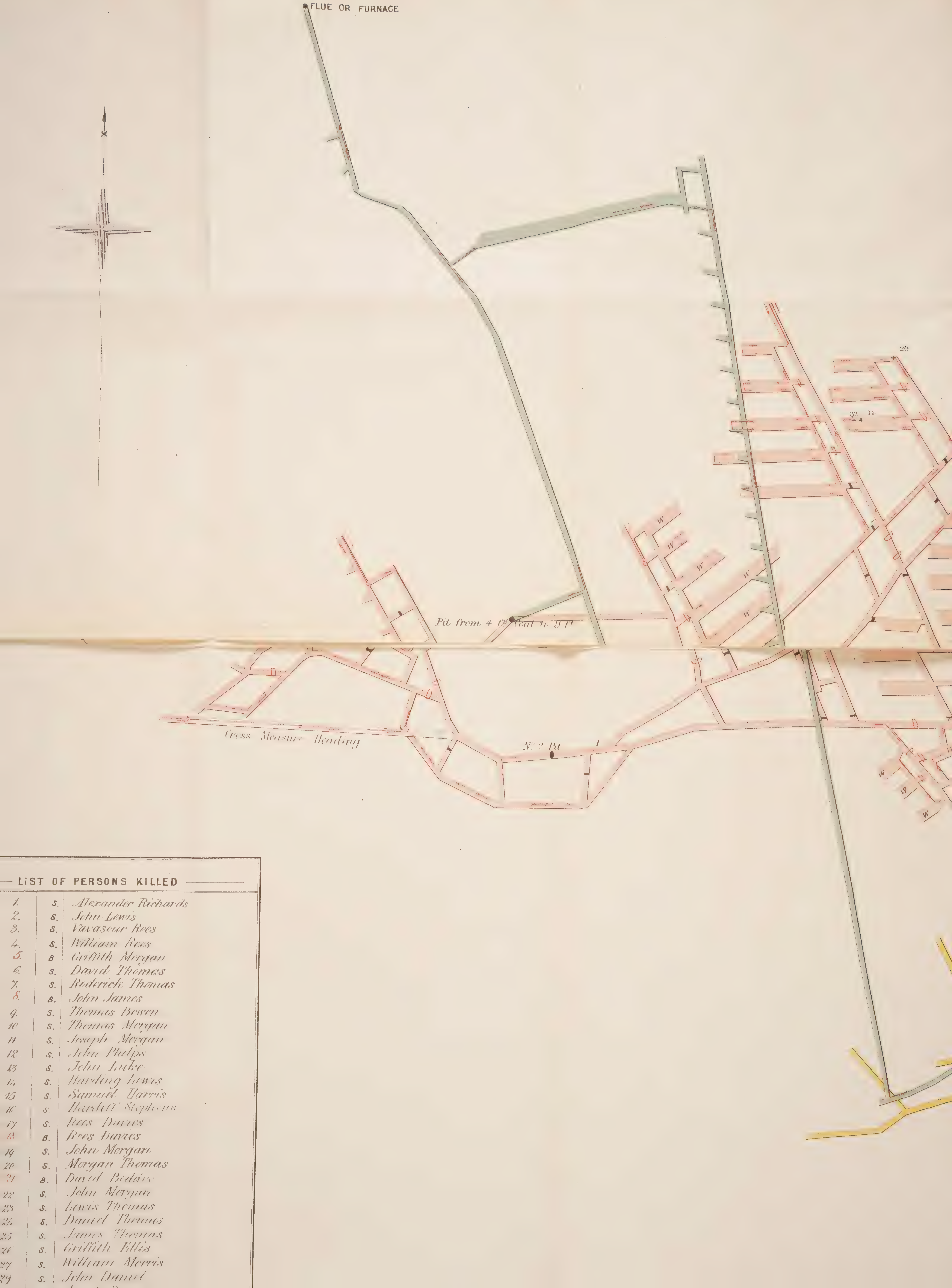
26
W
12
31
6
13
16
28
15
21
27
B
F
3
4
29
C
23
Horse Road
D
Pit from 6 ft to 9 ft
Heading
Pit sunk from 2'.9' Coal to Six feet
Measure
Pit sunk from four feet to 2'.9' Coal
Cross

REFERENCE

Part Colored Blue represents Workings in 4 Feet Seam
Dº Yellow Dº „ 6 Ft Dº
Dº Red Dº 9 Ft Dº
Dº Purple Dº 2 Ft 9 in Dº
Nºs in Black refer to Persons killed by suffocation


FLUE OR FURNACE
Pit from 4 ft Coal to 9 ft
Cross Measure Heading
No 2 Pit
1
20
32
14
W

LIST OF PERSONS KILLED

1.	S.	Alexander Richards
2.	S.	John Lewis
3.	S.	Vavasour Rees
4.	S.	William Rees
5.	B	Griffith Morgan
6.	S.	David Thomas
7.	S.	Roderick Thomas
8.	B.	John James
9.	S.	Thomas Bowen
10	S.	Thomas Morgan
11	S.	Joseph Morgan
12.	S.	John Phelps
13	S.	John Luke
14	S.	Harding Lewis
15	S.	Samuel Harris
16	S.	Hardill Stephens
17	S.	Rees Davies
18	B.	Rees Davies
19	S.	John Morgan
20	S.	Morgan Thomas
21	B.	David Beddoe
22	S.	John Morgan
23	S.	Lewis Thomas
24	S.	Daniel Thomas
25	S.	James Thomas
26	S.	Griffith Ellis
27	S.	William Morris
29	S.	John Daniel

the accident, or removing the men working beyond where the gas was issuing from the blower.

The fourth explosion occurred in Buxton pit, belonging to the Dowlais Iron Company, on the afternoon of Monday, May 29th, resulting in the death of four persons. The coal worked in this pit does not give off much gas, and is worked with candles or naked lights. It appeared, from the evidence at the inquest, that a fall had occurred in the upcast shaft, either on the day of, or the one previous to, the explosion, which contracted the area at the bottom, and doubtless reduced the quantity of air passing into the district in question. The workings where the explosion originated were considerably to the rise of the other workings, hence the accumulation of gas there. It was suggested at the inquest that the men working in the rise places had been out for some time, and that one of the doors which carried the air up to the top of the heading had been neglected; the gas accumulated, and was ignited by the haulier in going into the place to bring out a tram of coal. It is quite possible the explosion may have been so caused, but from my examinations of the district I am of opinion that no doors had been neglected, and that either from the obstruction at the bottom of the upcast shaft, or from some other cause, the air had become gradually reduced in quantity until too weak to dilute or carry off the gas exuding from the coal.

The fifth fatal explosion occurred on the morning of December 16, in the Pont-y-clerc Colliery, belonging to Mr. John Lloyd, Llanelly, causing the loss of one life.

On my examination of this colliery I found the ventilation weak, and the arrangements generally most defective. The overman in charge of the pit was totally ignorant of his duties and the responsibilities attaching to his position.

I recommended that the pit should be placed under the control of a competent man, and also several improvements relative to the ventilation and general conduct of the pit, all of which the owner, Mr. John Lloyd, promised should be carried out.

The sixth fatal explosion occurred on the morning of Wednesday, December 20th, in the Cethin Colliery, Merthyr Tydfil, resulting in the loss of no less than 34 lives, and serious injury to 10 or 12 more.

This colliery is the property of Mr. William Crawshay, of Caversham Park. I descended the pit about 2 o'clock p.m. on the day of the explosion, in company with Mr. Moody, the colliery manager, and other officials. We proceeded along the high level, on the east side of the shaft, in the 9-feet vein of coal, where I found unmistakeable signs of an explosion of gas having occurred. The doors, stoppings, &c., were for the most part blown out and destroyed, and there were traces of after-damp (the products of the explosion) still remaining; but considering the short time—probably not more than six hours—which had elapsed since the occurrence, and the fatal results produced, the quantity of after-damp was much less than I expected I should have found. On this inspection I carefully examined all matters which I considered at all likely to furnish a clue as to where and how the explosion had occurred, but not until we had reached the part marked A (see annexed plan of the underground workings) did I meet with anything to enable me to form a definite opinion on those matters. Here, however, we found several doors, stoppings, &c., which had been blown in certain directions. I also found gas in the stall marked C, within a very short distance of the heading or mouth of the stall, and the roof of the stall still falling and in a very unsettled state, which are the usual traces left by an explosion of gas, but, strange to say, no burnt coal or charred timber were found here. A danger signal had been placed at B to bar the entrance into the stall C. This danger signal had been blown against the rib on the opposite side of the heading marked F. At the points marked D and E certain clothes were found, which bore marks of the fire, and these were the only places where I met with distinct traces of fire. On Thursday, the 21st ult., *i.e.*, the day after the occurrence, I made another examination of the same workings, without, however, making any fresh discovery, but which certainly strengthened the opinion which I had already formed by my previous inspection as to where it occurred. Almost immediately after the explosion occurred the direction of a portion of the air had been changed, to enable the exploring parties to reach certain parts, where it was known several men would be found sooner than they otherwise could have done. This condition of things, with regard to the ventilation, continued during this and my previous inspection. On the 26th and 28th ult., *i.e.*, on the following Tuesday and Thursday, I made further examinations, and on the latter occasion I found that the doors, stoppings, &c., which were destroyed by the explosion had been replaced, and the ventilation restored and put as on the day of the explosion I carefully examined the whole, or nearly the whole, of the places which were at work on the 20th ult., as also the old works, as far as I considered it practicable and prudent to do so. During this inspection I was accompanied by the officials and several of the colliers who survived the explosion. We found gas in two places, viz., a small quantity lodged in a hole in the roof of the middle level, and in an old stall marked G A, extending some 6 or 8 yards back from the face. The gas which I had noticed on the 20th and 21st ult. in the stall C had been so reduced in quantity that I did not consider it prudent to penetrate so far into the stall as to reach it. It will have been observed that the condition of the pit on this occasion is supposed to be similar to what it was on the morning of the explosion. I therefore measured the quantity of air passing down the Cethin No. 2 shaft, the depth and area of which have already been stated, and into the 9-foot workings, where the explosion occurred. The total quantity of air descending the shaft was 36,828 cubic feet per minute, which was split or divided at the bottom of the shaft, 10,937 feet going into the workings on the west side—which workings had been only very slightly affected by the force of the explosion—the remainder, 25,891, proceeding eastward, which was again split at I and H, about two-thirds, or 17,260 feet, going to ventilate the workings on the north-west of the point marked H, and one-third, or 8,631, went to ventilate the workings on the north and south-east of the same point. From the foregoing it will be seen that during my inspections already referred to three accumulations of gas were met with, viz., one in a hole in the roof of the middle level, another in an old stall marked A, and another in the stall marked C. It does not appear that any provision or attempt had been made to remove the two former accumulations of gas. Indeed, I was informed by the officials of the pit who accompanied me that they were not aware of these accumulations until after the accident. I think that statement applied to both accumulations, but if not I shall be glad to be corrected, although a danger signal had been placed to prevent any person going into the old stall (John Hall's) marked G A. It is, I believe, usual to place danger signals to bar the entrance into old or worked-out places, if such places are not shut by other means. On Friday, the 5th instant, I again descended the pit, and on that occasion was accompanied by one of my colleagues, Mr. Brough, who had been desired by the Secretary of State to assist me in making my examinations, &c., &c. We examined all places which we thought at all likely to assist in forming an opinion as to how and where the explosion occurred. We were quite agreed as to where, but did not arrive at anything definite as to how the gas was fired. We measured the air, and found the total quantity circulating amounted to 30,937 feet per minute. On this occasion the air was travelling up Joseph Rees's heading and past Vavasour Rees's stall (where doubtless the explosion occurred) on to the colliers firing shots. We considered such a proceeding fraught with much danger, and at once recommended that John Eynon, in charge of the pit, should discontinue the firing of shots under such circumstances, which he promised to do. I now come to a more important point, namely, what probably was the cause of the accumulation of gas in Vavasour Rees's and Thomas Price's stalls, and how, in my opinion, it should have been dealt with. The stall C is the top one of some four or five stalls on the west side of the heading next to a part of the eastern boundary of this colliery. It appears these stalls are underneath certain houses, and it had not been definitely fixed whether the pillars between such stalls should be removed (worked away) or left standing to support the said houses. During this suspense the thurlings on the lower or south side of the stall, and especially the one on the lower side of Vavasour Rees's stall, had become crushed (that being the nature of the floor and roof of the 9-feet vein of coal) and of contracted area, which doubtless tended to limit or reduce the quantity of air passing there, and hence the accumulation of gas in the stall C. When this condition of things presented itself, it was the duty of the proper authorities to take the necessary steps to remove the said gas at a proper time and in a proper manner, to place a proper danger signal at the mouth of C stall, and to remove all persons (except such as may be engaged in removing the gas) from within a reasonable distance until that (the safe removal of the gas) had been effected. From the evidence I believe proper danger signals had been placed to bar the entrance into the three stalls which contained gas; but in my opinion the quantity of air passing south from the top or upper level should have been increased, and after leaving the face of the middle level diverted into Vavasour Rees's stall to clear away the gas there. No men should have been allowed to work on the lower side of the middle level until that (the gas cleared away) had been done. From much thought, the result of several examinations of the workings and the evidence I have heard, I have no hesitation in stating that in my opinion the gas in the stall C had been ignited, and was therefore the origin or cause of the sad and fatal explosion now under investigation; but inasmuch as this pit was worked with locked safety-lamps, I am unable to state with any amount of certainty by whom or by what means, viz., whether a naked light, defective lamp, or an improper use of an efficient one, the gas was fired. It has been stated that the lamp of David Beddoe, who was acting as overman, was found on the morning of the

24th or 25th ult. a few yards within the stall C, but when found was locked and uninjured. This, therefore, gives no clue as to how the gas was fired. Doubtless the deceased, David Beddoe, was well aware of the accumulation of gas in that stall; it is therefore difficult to conceive how he above all others should have approached it (the gas) except for a lawful purpose and in a proper manner. Having given my opinion as to the probable cause or origin of the accident, I shall now offer the following suggestions for the future working of the Cethin No. 2 pit:—1st. That the quantity of air, especially on the east side of the pit, be increased. 2nd. That all main levels or thoroughfares be ventilated with currents of fresh air, and so arranged that the fresh air shall pass from such headings, levels, &c., into the old works, and not *vice versâ*. 3rd. That all return airways be travelled only by proper and careful persons. 4th. That the Geordie or Stephenson lamp be used instead of the Clanny and Davy, and that the firing of shots be discontinued; that a more efficient person be appointed to examine and lock all lamps, and that the lamp department be improved. 5th. That all safety lamps be supplied by the proprietor of the works to the workmen; this would be a guarantee for the quality of the lamp. The custom throughout almost the whole of South Wales is for the colliers to purchase their own lamps, and they are, I fear, generally influenced by the amount of light they give and price at which they can be obtained, both doubtless of great importance, but ought nevertheless to be subservient to safety. I would strongly impress upon the officers of the colliery, the colliers, and others, the great importance of adhering strictly to the colliery rules, and especially with regard to the proper use of the safety-lamps. It is the duty of every person using a safety-lamp to satisfy himself that his lamp is locked before he leaves the lamp station, wherever that may be. I need hardly add that the painful facts which have been elicited in this inquiry present a sad picture of the utter want of even ordinary care in regard to the use of the safety lamps, lamp keys, or contrivances for opening lamps, lamps unlocked, matches, pipes, and tobacco having been found in the pockets of several of the unfortunate sufferers in this sad calamity.

The result of the coroner's inquest, held by George Overton, Esq., which lasted several days, was a verdict of manslaughter against the colliery manager, Mr. John Moody, and his under-viewer, Mr. Wm. Davies, both of whom were tried before Mr. Justice Blackburn, at the Swansea Assizes in March last. After hearing the evidence produced, his Lordship said there was no case against William Davies, and a verdict of not guilty was returned against Mr. Moody.

Mr. Lionel Brough, one of my colleagues, who had been desired by the Secretary of State to assist in this matter, then read the following report:—

I am Her Majesty's Inspector of Mines for the South-Western District of Great Britain, and have made my investigation with regard to the Cethin explosion, and attended the inquiry, by the directions of the Secretary of State. Mr. Wales will lay before you more complete and elaborate evidence than I possibly can, because he was actually in the pit on the day of the explosion, whereas I was not instructed to assist in the matter until after a considerable lapse of time; and it was as late as Friday, the 5th instant, when I was enabled to inspect the colliery. I am of opinion that the explosion occurred in Vavasour Rees's stall; of that I have no doubt whatever. I think the gathering together of gas in that stall is to be attributed to the obstruction in the cross hole between his working place and the one just below it. Such continued obstruction was, I believe, the primary cause of the calamity. The altering of the ventilation, or rather the reversing it, by Mr. Moody, was so far judicious that it did away with vitiated air coming in contact with the firing of gunpowder, though, at the same time, it had the defect of sending diluted air down hill instead of up. A current of air descending a pit from the surface, and proceeding down a slope to the deepest part of the workings, is an effective method on account of its greater density, which prepares it admirably for the performance of its great function of sweeping clean all the openings from that lowest point right up to the rise, but I should tell you that some very able men differ with me in opinion on this subject. When Mr. Moody determined to alter the ventilation, it involved the conduction of warmed, and, consequently, dilated air, down through Joseph Rees's heading and its adjuncts. Now, the tendency of attenuated air is not to find its way down hill as freely as it would ascend; nevertheless, under the conditions ruling in that colliery at the time, I still think it might have turned out a useful change, though I agree with Rees Price in that part of his evidence wherein he says, that "everything ought to have corresponded in order that it should have met with perfect success." This brings me to speak of the general state of the ventilation of the Nine Foot seam of coal at the Cethin Colliery. The quantity of fresh air descending from the surface could scarcely be said to be insufficient for ordinary purposes; but the question which naturally arises is as to whether or not a proper quantity arrived at the far ends and distant faces of work. Its travel was tortuous and intricate, as it had to pass in and out in various directions, and through three underground pits or staples. Furthermore, the practice appears to have prevailed in Cyfarthfa collieries, of scaling air through workings belonging to abandoned cross-headings, thus again lessening the amount so much required in those stalls which were furthest from the bottom of the downcast. Fiery collieries, with currents of air only just enough to preserve the pit from explosion when all goes smoothly and everything is in its normal condition, may be said to be attended with the contingent danger, that when anything takes place they are unable to contend with it, and calamitous results ensue. Those collieries are the best which possess a power of ventilation beyond the mere balance of conditional safety; when danger suddenly makes its appearance, surplus ventilation is often able to surmount and conquer it. Restricted columns of air never can do so. My belief then is, that to place the No. 2 Cethin in the category of a surplus-powered pit, would be to sink an entirely new shaft right down to the 9-foot vein of coal, and devote it altogether to ventilating purposes; a pair of furnaces of its own of course being constructed near the bottom, severing connexion completely with those belonging to the upper 4-foot seam. A high stack is a help, and is to a certain degree effective, but naked chimneys radiate a large portion of their caloric into free space. On the contrary, a deep pit, down through strong ground, preserves its hot column in a far greater degree than any high stack can ever possibly perform. The evidence adduced at this inquest by no means establishes anything like ability or discipline in the lamp department of the Cethin Colliery. Whilst underground with Mr. Wales we met a young boy going in-bye with an unlocked lamp, more than one lamp found after the explosion was also found to be unlocked. The colliers are permitted to buy their own lamps, manufactured anywhere or everywhere, whereas, if the owners were to supply all their workmen, they would in all probability purchase their lamps of some approved makers in Newcastle-on-Tyne. Another circumstance became apparent from evidence; that is to say, if a collier was anxious to proceed hurriedly to his working place, he could, with but little difficulty, evade examination by the poor old man stationed near the bottom of the pit. I believe the gas could have been soon got out of the thurling between Vavasour Rees's stall and that of Thomas Price; but whether it was easy or difficult to dislodge it from there, or whether even it was necessary to head down from the middle level, they should certainly in either, or every, or any case, have kept the colliers out until the gas was entirely removed from both the stalls, whatever might have been the length of time required for the performance of the operation. To continue a dangerous accumulation of fire-damp for days together was to imperil the lives of the workpeople. I beg to add that, as the throttled cross-hole seriously affected one of the air currents, and caused a dangerous reservoir of gas to form in Vavasour Rees's stall, and most likely in the one below it, the non-ventilation of those places became, in my opinion, an infringement of the first general rule of the Act of Parliament, 23 & 24 Vict. c. 151. I repeat, therefore, that the men should have been withdrawn, and then the fire-damp swept away by an adequate current of sharp air.

Two cases of suffocation by gases have occurred, causing the loss of two lives.

The first, No. 4 on the list, occurred in the Bwllfa Colliery, Aberdare, belonging to the Bwllfa Coal Company on the 16th of January.

It appeared a few days previous to the 16th a certain heading had struck a fault, was abandoned, and gas accumulated in the face.

A proper danger signal was placed at the entrance to the heading. The deceased had worked in the heading in question up to the time of its being stopped, and on the 16th left his lamp and passed the danger signal to go into the face to get his tools, which had been left there, and was suffocated by inhaling carburetted hydrogen gas. No blame could be traced to any person except the deceased in disregarding the usual danger signal; but probably deceased was not aware of this gas possessing any other dangerous property than that of being highly explosive, hence his leaving his lamp behind.

The other case, No. 89, occurred on the 11th of September in the Lower Duffryn Colliery, Aberdare Valley, belonging to the Powell's Steam Collieries Company, and resulted in the death of a person named John Barber. For several months prior to this occurrence the rubbish on the floor and the roof of the mine near to this spot had been on fire, and although at this time it was believed the fire was extinguished, yet considerable heat was given off, the thermometer near the roof indicating a temperature of 170° to 180°. The deceased was occupied in directing the water through a pipe on to the hot matter to cool the air, and to extinguish the fire, if any remained.

As two or three persons on their way to the bottom of the shaft were passing the entrance to the place where deceased worked they called to him, but receiving no reply they went into the place and found deceased lying quite insensible. They took him up the pit, and home, and procured proper medical assistance, but he never rallied, and died next day.

On my examination of the place where deceased was engaged I found a considerable quantity of carbonic acid gas near the floor of the mine, some of which doubtless he had inhaled, which caused his death. With your permission I instituted proceedings against the manager of the Lower Duffryn Colliery, Mr. George Wilkinson, for a breach of the first general rule of the Coal Mines Inspection Act. The case was heard at Aberdare by J. C. Fowler, Esq., stipendiary magistrate, and G. Williams, Esq., and a fine of 5*l.* imposed.

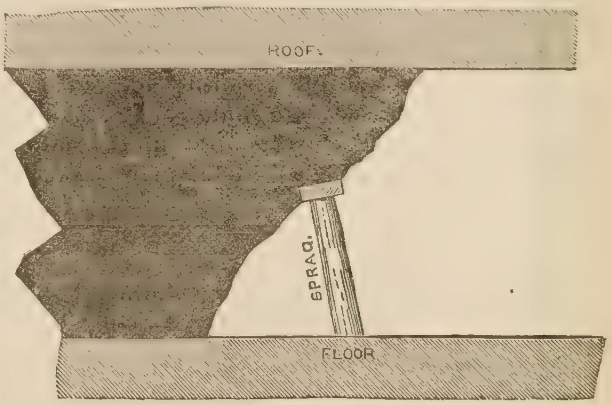
Fifteen persons were killed by falls of coal.

The somewhat peculiar structure of many of the coals in the South Wales basin renders the working of them a dangerous operation.

It frequently happens that as much as from half to five or six tons of coal falls at once, and without giving any warning whatever, so that the most vigilant care and judgment are required on the part of the colliers to guard against such casualties.

I fear spragging is too often neglected.

In working many of the thick coals I think it should be made compulsory that the colliers should put in sprags, (pieces of timber to keep up the coal till all is quite ready to take it down, see annexed sketch,) regularly, and not, as at present, left to their option whether they shall do so or not.



The colliers, generally speaking, prop or timber their own stalls, and as the remuneration they receive is by the ton of coal cut, and not on the amount of timber they put in, I fear they often look upon such work as extra, and are apt to neglect it.

The total number of deaths from falls of stone is 42.

The bulk of those accidents were caused by falls occurring unexpectedly, some, however, were traceable to inexperience and want of judgment on the part of deceased themselves. Every possible care in examining the roof and sides ought to be exercised, both by the officials as well as the colliers themselves, and it is the duty of the former to see that the latter are at all times supplied with sufficient suitable timber.

The custom is for the colliers to supply themselves with pitwood or timber from stocks kept at the top of the pits. It would I think be better if it was delivered in or near each working place.

The total number of deaths in shafts amounted to 17; seven of these, viz., Nos. 5, 15, 30, 39, 80, 91, and 96, were referable to the carelessness of deceased themselves, and the others to stones and coal falling from ascending loads, and from deceased falling down the shafts whilst engaged in repairing the same.

Twenty-seven lives have been lost by miscellaneous accidents, 25 of which were caused by trams, and out of the 25 no less than 16 were only from 10 to 16 years of age, and for the most part engaged as door-boys. The practice throughout almost the whole of the collieries in the Aberdare Valley is for the door-boys, generally only from 10 to 15 years of age, to travel in front of the horses with the full and empty trams, instead of remaining stationary at their doors. Boys of such tender years are utterly incapable of performing such laborious work for 12 hours daily, and this I have no hesitation in stating is the chief cause of the great fatality under this head.

I have pointed this out to many of the colliery managers where it is done, but the reply I generally receive is that "the hauliers (the persons engaged in bringing the coal "with horses from the workings to the bottom of the shaft) would not work without "having the boys to travel with them."

I am not prepared to say whether or not anyone should travel with the hauliers, but this I am prepared to say, that it is cruel to put boys of such tender years to do so, and in my opinion ought not to be allowed. And, moreover, I am of opinion that such a plan greatly conduces to doors being neglected, for under such a system the doors are really not attended to, nor under the charge of any particular boy, but of all that pass through them, "and what is everybody's business is nobody's."

Eleven deaths have been caused by accidents on the surface, viz., three by machinery, and eight by miscellaneous causes, principally from being crushed by trucks and trams.

In conclusion, I beg again to state that the firing of shots where safety-lamps are used ought not to be permitted.

The responsibility of examining places for gas before shots are fired is too great to entrust to any one person, for a mistake in judgment or carelessness on his part might cause the loss of many lives.

This duty is often entrusted to men unable to either read or write.

Too much latitude is given in allowing men (oftentimes unfit to be entrustsd) to carry safety-lamp keys. The greatest care and judgment ought to be exercised by the colliery manager in this matter, and on *no* account should any person, either official or unofficial, be allowed to carry a lamp key beyond the lamp-station, wherever that may be.

All boys attending the principal or important doors ought to be stationary, and not allowed to travel with the hauliers, or leave their doors for any other purpose. The Act with regard to the prohibition of boys from working underground until they have attained certain ages (12 if not able to read or write, and 10 if able to read and write or attend school) is not, I regret to state, so strictly carried out as I could wish, and as it ought to be.

Three cases, one at Cyfarthfa and two at Powell's Steam Coal Company's Collieries, have come under my notice during the past year; in two of which, with your permission, proceedings were instituted against the colliery managers. The first, Cyfarthfa, no fine was imposed, as the colliery manager produced a certificate from the deceased's parents that he was the requisite age, &c.; and the second case was dismissed, as a certificate of deceased's age could not be obtained, &c., &c.; and in the third case deceased was employed on the surface, not in the mine, and did not, therefore, come within the scope of the Act 23 & 24 Vict. cap. 151. sec. 1.

I have, &c.
Thos. E. Wales,
Inspector of Mines.

To the Right Hon. Sir George Grey, Bart., G.C.B., &c.,
Home Secretary, London.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS of LIFE arising therefrom, in the SOUTH WALES DISTRICT, during the Year ended 31st of December 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1865. Jan. 1	1	Deep Duffryn	Aberdare	John Nixon & Co.	Wm. Llewellyn	Haulier	12	Fell under trams	–	–	–	–	–	1	–	–	–
„ 9	2	Oakwood	Taibach	English Copper Co.	Jos. Aubrey	Ditto	23	Crushed by trams	–	–	–	–	–	1	–	–	–
„ 5	3	Dowlais	Dowlais	Guest and Co.	John Davies	Collier	65	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 16	4	Bwllfa	Aberdare	Bwllfa Coal Co.	Hy. Philips	Collier	20	Suffocated by going into gas. A proper danger signal was placed to indicate danger, but deceased passed it, and so brought about his death.	–	–	–	1	–	–	–	–	–
„ 17	5	Tondû	Bridgend	J. Brogden and Sons	Not known	None	—	Deceased is supposed to have walked into the shaft whilst drunk.	–	–	–	–	1	–	–	–	–
„ 18	6	Gadlys	Aberdare	Gadlys Iron Company	Hy. Neat	Labourer	21	Injured by falling before trams on Graig Incline-plane, from which injuries he died.	–	–	–	–	–	–	–	1	–
„ 27	7	Plymouth	Merthyr Tydvil	Plymouth Iron Company	Sodk. Lewis	Collier	27	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 28	8	Abergorki	Pontypridd	George Insole & Son	Evan Jones	Sinker	—	By a fall of stone in sinking shaft.	–	–	–	–	1	–	–	–	–
								Total number of deaths in January	–	–	2	1	2	2	–	1	–
Feb. 1	9	Werfa	Aberdare	Heath, Evans, & Company	Hy. Evans	Labourer	26	Crushed by trucks on surface	–	–	–	–	–	–	–	1	–
„ 3	10	Cwmbwla	Swansea	Cwmbwla Coal Company	Dl. Williams	Carter	15	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 11	11	Dynevor	Neath	Dynevor Coal Company	Griff. Morgan	Haulier	15	Run over by trams	–	–	–	–	–	1	–	–	–
„ 13	12	Pentyrch	Cardiff	T. W. Booker & Co.	Fredk. Moor	Ditto	13	Fell from stage	–	–	–	–	–	1	–	–	–
„ 16	13	Werfa	Aberdare	Heath, Evans, & Co.	Chas. Davies	Labourer	23	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 17	14	Bute Merthyr	Pontypridd	Marquis of Bute	John Middleton	Collier	35	Explosion of gas—ignited by firing a shot.	1	–	–	–	–	–	–	–	–
					George Dyer	Ditto	22		1	–	–	–	–	–	–	–	–
					Thos. Williams	Ditto	28		1	–	–	–	–	–	–	–	–
					Jos. Hall	Ditto	21		1	–	–	–	–	–	–	–	–
„ 21	15	Pontyclerc	Llanelly	John Lloyd	John Evans	Ditto	31	Fell from carriage whilst ascending shaft.	–	–	–	–	1	–	–	–	–
„ 22	16	Dowlais	Dowlais	Guest and Co.	Hez. Morgan	Labourer	54	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 24	17	Top Hill	Gellygaer	W. S. Cartwright	Daniel Morgan	Haulier	22	Fell under trams	–	–	–	–	–	1	–	–	–
								Total number of deaths in February	4	–	3	–	1	3	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1865.																	
Mar. 4	18	Duffryn	Aberdare	Powell's Steam Coal Co.	W. Jones	Collier	42	Fall of coal	–	1	–	–	–	–	–	–	–
„ 6	19	Llynvi Vale	Bridgend	Llynvi Vale Iron Company	John Evans	Ditto	22	Fall of coal	–	1	–	–	–	–	–	–	–
„ 7	20	Ysqubor Wen	Aberdare	Samuel Thomas	William Thomas	Haulier	23	Fall of coal	–	1	–	–	–	–	–	–	–
„ 10	21	Landore	Swansea	Richards and Glassbrook	John Griffiths	Collier	17	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 10	22	Calvert	Swansea	T. A. Williams	William Grey	Ditto	26	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 13	23	Llantwit	Pontypridd	Thomas Powell	John Morgan	Ditto	24	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 13	24	Cwm Neol	Aberdare	The United Merthyr Collieries Company.	Levi Thomas	Hitcher	29	Fell down shaft from 4-feet to 9-feet vein—50 yards.	–	–	–	–	1	–	–	–	–
„ 14	25	Ynishir	Pontypridd	Edward Lewis	John Jones	Collier	27	Fall of stone from side	–	–	1	–	–	–	–	–	–
„ 16	26	Bodringallt	Ditto	Bodringallt Coal Company	Charles White	Ditto	36	Fall of stone from roof	–	–	1	–	–	–	–	–	–
					Thomas White – father and son.	Ditto	11	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 21	27	Penygraig	Llantrissant	Thomas Rowlands	John Davies	Ditto	—	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 21	28	Llettyshenkin	Aberdare	Llettyshenkin Coal Co.	George Jones	Haulier	13	Run over by trams	–	–	–	–	–	1	–	–	–
„ 21	29	Bryncoch	Neath	Samuel Owen	William Owen	Ditto	15	Run over by trams	–	–	–	–	–	1	–	–	–
„ 25	30	Nantymelin	Aberdare	Mordecai Jones	John Jenkins	Hitcher	44	Deceased, against the rules of the colliery, descended in an empty tram against a loaded one, and after getting below the loaded tram it fell upon him.	–	–	–	–	1	–	–	–	–
„ 28	31	Llynvi Vale	Bridgend	Llynvi Vale Coal Company	John Thomas	Collier	19	Fall of rubbish	–	–	1	–	–	–	–	–	–
„ 30	32	Gwendraeth	Llanelly	William Harris	Joshua Williams	Ditto	54	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 31	33	Neath Abbey	Neath	Neath Abbey Coal Co.	John Lewis	Haulier	15	Fell under trams	–	–	–	–	–	1	–	–	–
								Total number of deaths in March	–	3	9	–	2	3	–	–	–
April 2	34	Merthyr Dare	Aberdare	Rhys & Company	Daniel Thomas	Pitman	46	Fell down shaft whilst engaged repairing pumps.	–	–	–	–	1	–	–	–	–
„ 3	35	Bwllfa	Aberdare	Bwllfa Coal Company	Rees Davis	Sinker	51	By a shot (ignition of gunpowder)	–	–	–	–	–	1	–	–	–
„ 4	36	Cwmbwla	Swansea	Cwmbwla Coal Company	John Williams	Overman	45	By riding up engine plane on trams in violation of the colliery rules.	–	–	–	–	–	1	–	–	–
„ 5	37	Lower Duffryn	Aberdare	Powell's Steam Coal Co.	John Jones	Hitcher	35	Something falling upon him at bottom of shaft.	–	–	–	–	1	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Under ground.						On surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1865. April 6	38	Pentre -	Swansea -	Vivian & Sons -	William Evans -	Collier -	17	Fall of stone from roof -	–	–	1	–	–	–	–	–	–
„ 7	39	Pentyrch -	Cardiff -	T. W. Booker & Co. -	Thomas Coutts -	Deputy - Overman	38	Fell down shaft; coal was raised from two places in the shaft, deceased was ascending from the lower place, and it was supposed he attempted to get out at the upper place without stopping the carriage.	–	–	1	–	–	–	–	–	–
„ 15	40	Gyfeillon -	Pontypridd -	Gyfeillon Coal Company -	Robert Maddox	Haulier -	25	Trucks passed over deceased (on surface).	–	–	–	–	–	–	–	1	–
„ „	41	Dowlais -	Dowlais -	Guest and Co. -	Jonathan Davies	Ditto -	13	Deceased either fell or walked inadvertently into hot water which had been let out of the boiler and was scalded to death.	–	–	–	–	–	–	–	1	–
„ 26	42	Cwmamon -	Aberdare -	Shepherd & Evans -	David Williams	Ditto -	26	Fell before trams -	–	–	–	–	–	1	–	–	–
„ 29	43	Penydarran -	Merthyr Tydfil -	Guest and Co. -	David Jones -	Collier -	55	Fall of stone from roof -	–	–	1	–	–	–	–	–	–
								Total number of deaths in April	–	–	2	–	3	3	–	2	–
May 1	44	Plymouth -	Merthyr Tydfil -	Plymouth Iron Co. -	Thomas Thomas	Engineer	23	Got entangled by machinery whilst putting the engine into gear to pump.	–	–	–	–	–	–	1	–	–
„ 5	45	Berrington -	Swansea -	Berrington Coal Co. -	Thomas Jones -	Collier -	54	Fall of coal -	–	1	–	–	–	–	–	–	–
„ 6	46	Llettyshenkin -	Aberdare -	Llettyshenkin Coal Co. -	Francis Hughes	Haulier -	16	Fell in before trams -	–	–	–	–	–	1	–	–	–
„ 13	47	Cwmllynfell -	Swansea -	James & Aubrey -	Isaac Williams -	Collier -	19	Fell from carriage whilst assisting pit carpenter to repair shaft.	–	–	–	–	1	–	–	–	–
„ 14	48	St. George's -	Llanelly -	Simms, Williams, Neville, & Co.	David Bossett -	Ditto -	14	Injured by a fall of coal April 5, and died May 14.	–	1	–	–	–	–	–	–	–
„ 16	49	Tondû -	Bridgend -	J. Brogden & Sons -	Thos. Richards	Ditto -	23	Fall of coal -	–	1	–	–	–	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1865. May 19	50	Vochriw	Dowlais	Guest & Company	John Hughes	Collier	15	Explosion of gas on the 10th May, with 13 others, non-fatal. This explosion was caused by the recklessness of a person about 40 years of age in passing the danger signal with a lighted candle in his hand; he was seriously burnt but recovered.	1	–	–	–	–	–	–	–	–
,, 20	51	Cwmaman	Aberdare	Shepherd & Evans	David Jones	Collier	15	Explosion of gas; two men were also burnt but recovered.	1	–	–	–	–	–	–	–	–
,, 20	52	Bwllfa	Ditto	Bwllfa Coal Company	Joseph Morris	Ditto	13	Fall of stone from roof	–	–	1	–	–	–	–	–	–
,, 23	53	Ditto	Ditto	Ditto	Evan Evans	Ditto	20	Ditto	–	–	1	–	–	–	–	–	–
,, 23	54	Abernant	Ditto	R. Fothergill & Company	Edward Thomas	Ditto	15	Ditto	–	–	1	–	–	–	–	–	–
,, 26	55	Tondû	Bridgend	J. Brogden & Sons	John Rogers	Ditto	34	Fell before trams on incline plane (surface).	–	–	–	–	–	–	–	1	–
,, 27	56	Llantwit	Pontypridd	Thomas Powell	Evan Llewellin	Ditto	32	Fall of stone	–	–	1	–	–	–	–	–	–
,, 29	57	Buxton	Dowlais	Guest & Co.	John Evans	Haulier	23	Explosion of gas	1	–	–	–	–	–	–	–	–
					Thomas Hill	Doorboy	12	Ditto	1	–	–	–	–	–	–	–	–
					William Davies	Collier	18	Ditto	1	–	–	–	–	–	–	–	–
					Evan Evans	Ditto	17	Ditto	1	–	–	–	–	–	–	–	–
								Two more persons were burnt at the same time, but recovered.									
								Total number of deaths in May	6	3	4	–	1	1	1	1	–
June 2	58	Abercanine	Merthyr Tydfil	Plymouth Iron Company	Daniel Thomas	Ditto	20	Fall of coal	–	1	–	–	–	–	–	–	–
,, 2	59	Abernant	Aberdare	R. Fothergill & Company	Edward Thomas	Ditto	15	Fall of stone	–	–	1	–	–	–	–	–	–
,, 2	60	Victoria	Llanelly	Thomas Harris	John Lewis	Trammer	16	Fall of stone from roof	–	–	1	–	–	–	–	–	–
,, 4	61	Aberaman	Aberdare	C. Bailey, M.P.	David Morgan	Not employed.	7	Got entangled in machinery on surface.	–	–	–	–	–	–	1	–	–
,, 15	62	Lower Duffryn	Aberdare	Powell's Steam Coal Co.	Richd. Williams	Haulier	18	Fall of stone from roof	–	–	1	–	–	–	–	–	–
,, 17	63	Middle Duffryn	Ditto	Ditto	John George	Labourer	42	Ditto	–	–	1	–	–	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1865.																	
June 19	64	Neath Abbey -	Neath - -	Neath Abbey Coal Co. -	Thomas Roberts	Collier -	36	Fall of coal - - -	–	1	–	–	–	–	–	–	–
„ 20	65	Dinas - -	Pontypridd -	Coffin & Co. - - -	David Partridge	Ditto -	31	Ditto - - - - -	–	1	–	–	–	–	–	–	–
„ 21	66	Cyfarthfa -	Merthyr Tydfil -	W. Crawshay - - -	Thomas Rees -	Ditto -	8	Fell off carriage whilst descending shaft. The colliery manager was with your sanction summoned for employing deceased, he being only 8 years of age, but no fine was imposed, as the colliery manager produced a certificate purporting to be from deceased's father to the effect that deceased was more than 10 years of age.	–	–	–	–	1	–	–	–	–
								Total number of deaths in June -	–	3	4	–	1	–	1	–	–
July 2	67	Primrose -	Swansea - -	Primrose Coal Company -	W. Morgan -	Collier -	34	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
„ 2	68	Forchaman -	Aberdare -	United Merthyr Collieries Company.	John Mahoney -	Door-boy	15	Fell under trams - - - -	–	–	–	–	–	1	–	–	–
„ 3	69	Ponttygleison -	Merthyr Tydfil -	Benjamin Davies - -	Thomas Evans -	Collier -	23	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
„ 6	70	Bwllfa - -	Aberdare -	Bwllfa Coal Company -	Joseph Dinning-	Ditto -	13	Ditto - - - - -	–	–	1	–	–	–	–	–	–
„ 8	71	Gorse - -	Llanelly - -	Simms, Williams, Foster, Neville, and Company.	Isaac Philips -	Ditto -	34	Fell under trams - - - -	–	–	–	–	–	1	–	–	–
„ 12	72	Bwllfa - -	Aberdare -	Bwllfa Coal Company -	David Lewis -	Ditto -	32	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
„ 12	73	Blaengwawr -	Ditto - -	David Davies - - -	Edward Thomas	Door-boy	14	Fell under trams - - - -	–	–	–	–	–	1	–	–	–
„ 15	74	Llynvi Vale -	Bridgend - -	Llynvi Vale Iron Co. -	James Howells -	Collier -	14	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
„ 17	75	Dinas - -	Pontypridd -	Coffin & Company - -	Jenkin Davis -	Pitman -	37	Fell from part way down the shaft whilst engaged in repairing slides.	–	–	–	–	1	–	–	–	–
„ 25	76	Tyr Cenol -	Swansea - -	Williams, Forster, & Co. -	W. Williams -	Labourer	13	Burnt by going into boiler flueway; went for curiosity.	–	–	–	–	–	1	–	–	–
„ 27	77	Gorwydd -	Ditto - -	Alfred Sterry - - -	Evan Davies -	Collier -	32	Fall of stone from roof - - -	–	–	1	–	–	–	–	–	–
								Total number of deaths in July -	–	–	6	–	1	4	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
Aug. 1	78	Werfa	Aberdare	Heath, Evans, and Co.	John Knott	Fitter	49	Examining cylinder of hauling engine, the piston being suspended by a rope which broke and fell upon deceased.	–	–	–	–	–	–	1	–	–
„ 5	79	Abercwmboy	Aberdare	David Davies	W. Bevan	Collier	30	Fall of stone from roof	–	–	1	–	–	–	–	–	–
					John Jones	Ditto	17	Ditto	–	–	1	–	–	–	–	–	–
„ „	80	Dowlais	Dowlais	Guest and Co.	W. Morris	Haulier	33	Carriage came down upon deceased whilst passing under bottom of shaft.	–	–	–	–	1	–	–	–	–
„ 12	81	Pentyrch	Cardiff	T. W. Booker & Co.	Thomas Evans	Screener	60	Crushed by trucks (surface)	–	–	–	–	–	–	–	1	–
„ 20	82	Cwm Neol	Aberdare	United Merthyr Collieries Company.	John Davies	Doorboy	12	Fell under trams	–	–	–	–	–	1	–	–	–
„ 21	83	Cyfarthfa	Merthyr Tydfil	W. Crawshay	John Sullivan	Labourer	50	Fall of stone	–	–	1	–	–	–	–	–	–
„ 22	84	Cwmdare	Aberdare	Powell's Steam Collieries Company.	W. Rees	Doorboy	10	Fell under trams; deceased was able to read and write.	–	–	–	–	–	1	–	–	–
„ 23	85	Blaengwawr	Ditto	David Davies	Josiah Williams	Sinker	44	Fell from scaffold in sinking shaft	–	–	–	–	1	–	–	–	–
								Total number of deaths in August	–	–	3	–	2	2	1	1	–
Sept. 5	86	Gorwydd	Swansea	Alfred Sterry	John Mandy	Signal boy	14	Riding on rope on incline plane and fell off in front of the trams.	–	–	–	–	–	1	–	–	–
„ 9	87	Amman	Llanelly	Amman Iron Company	W. Jones	Collier	14	Fall of coal	–	1	–	–	–	–	–	–	–
„ 11	88	Lantwit	Pontypridd	Thomas Powell	Thomas Bagnell	Ditto	56	Fall of stone	–	–	1	–	–	–	–	–	–
„ „	89	Lower Duffryn	Aberdare	Powell's Steam Collieries Company.	John Barker	Haulier	21	Suffocated by inhaling carbonic acid gas. The colliery manager was with your permission proceeded against for breach of 1st General Rule and fined 5*l.*	–	–	–	1	–	–	–	–	–
„ 14	90	Navigation	Ditto	J. Nixon and Co.	Thomas Davies	Collier	34	Fall of stone	–	–	1	–	–	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shaft.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1865. Sept. 19	91	Cwm Neol -	Aberdare - -	United Merthyr Collieries Company.	W. Rees - -	Fireman -	45	Deceased, with three more persons, were on the top of a water barrel ready to ascend the shaft, when the pumping engine started, the noise of which startled deceased, he jumped off, and fell to the bottom of the shaft.	–	–	–	–	1	–	–	–	–
„ 20	92	Lower Duffryn	Aberdare - -	Powell's Steam Collieries Company.	Lewis Jones -	Labourer	13	Fell in front of trucks - - -	–	–	–	–	–	–	–	1	–
„ 25	93	Glyncorrwg -	Briton Ferry -	Glyncorrwg Coal Co. -	John Davies -	Haulier -	21	Fell under trams - - - -	–	–	–	–	–	1	–	–	–
„ 30	94	Neath Abbey -	Neath - -	Neath Abbey Coal Co. -	Thos. Abraham	Ditto -	15	Ditto - - - - - -	–	–	–	–	–	1	–	–	–
„ „	95	Middle Duffryn	Aberdare -	Powell's Steam Collieries Company.	John Morgan -	Hitcher -	27	By a piece of coal falling down the shaft upon him.	–	–	–	–	1	–	–	–	–
„ „	96	Forchaman -	Ditto -	United Merthyr Steam Collieries Company.	Thomas Rees -	Fireman -	45	Carriage came down upon him when passing under bottom of shaft.	–	–	–	–	1	–	–	–	–
								Total number of deaths in September	–	1	2	1	3	3	–	1	–
Oct. 2	97	Nash & Sprinkle	Haverfordwest -	Nash & Sprinkle Coal Company.	John Warlon -	Collier -	25	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
„ „	98	Llancaich -	Gellygaer - -	George Worthington -	Thos. Edwards -	Ditto -	40	Ditto - - - - - -	–	–	1	–	–	–	–	–	–
„ 4	99	Dowlais - -	Dowlais - -	Guest & Co. - - -	David Davies -	Ditto -	29	Fall of coal - - - - -	–	1	–	–	–	–	–	–	–
„ 5	100	Vochriw - -	Ditto - -	Guest & Co. - - -	W. Hughes -	Pitman -	32	Repairing pumps in shaft and fell -	–	–	–	–	–	1	–	–	–
„ 6	101	Navigation -	Aberdare - -	J. Nixon & Co. - -	David Philips -	Doorboy	12	Fell in front of trams - - -	–	–	–	–	–	1	–	–	–
„ 13	102	Llettyshenkin -	Ditto - -	Llettyshenkin Coal Co. -	William Jones -	Haulier -	28	Ditto - - - - - -	–	–	–	–	–	1	–	–	–
„ 18	103	Abergwawr	Ditto - -	Powell's Steam Collieries Company.	Benj. Evans -	Collier -	45	Fall of coal - - - - -	–	1	–	–	–	–	–	–	–
„ 20	104	Cwm Mawr -	Llanelly	John Harris - - -	David Skin -	Hitcher -	20	A piece of coal fell from part way up shaft on his head.	–	1	–	–	–	–	–	1	–
„ „	105	Cwmpennar -	Aberdare - -	Powell's Steam Collieries Company.	Evan Price -	Collier -	17	Fall of stone - - - -	–	–	1	–	–	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1865. Oct. 21	106	Cwmpennar -	Aberdare - -	Powell's Steam Collieries Company.	John Jenkins -	Labourer	60	Fell in front of trams when passing down self-acting incline plane.	–	–	–	–	–	1	–	–	–
„ 31	107	Navigation -	Ditto - -	J. Nixon & Co. - -	John Williams -	Ditto -	60	Run over by trams - - -	–	–	–	–	–	1	–	–	–
								Total number of deaths in October	–	3	3	–	–	5	–	–	–
Nov. 16	108	Abernant -	Aberdare - -	R. Fothergill & Co. -	W. Williams -	Collier -	17	Fall of coal - - - - -	–	1	–	–	–	–	–	–	–
„ 28	109	Neath Abbey -	Neath - -	Neath Abbey Coal Co. -	John Jones -	Ditto -	21	Ditto - - - - - -	–	1	–	–	–	–	–	–	–
								Total number of deaths in November	–	2	–	–	–	–	–	–	–
Dec. 1	110	Weeg - -	Swansea - -	G. B. Morris - - -	Edward John -	Ditto -	17	Chain broke on engine plane, and deceased was run over by the trams.	–	–	–	–	–	1	–	–	–
„ 2	111	Cwmdare -	Aberdare - -	Powell's Steam Collieries Company.	William Sheen -	Labourer	8	Suffocated by small coal. Deceased being employed on the surface, the case did not come within the scope of section 1st, 23 & 24 Victoria, cap. 151, but both the deceased's guardian, a stepfather, and the colliery manager were censured by the jury for employing a boy of such a tender age.	–	–	–	–	–	–	–	1	–
„ 5	112	Lantwit - -	Pontypridd -	Thomas Powell - -	John Jenkins -	Collier -	24	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
„ 9	113	Bwllfa - -	Aberdare - -	Bwllfa Coal Co. - -	Evan Morgan -	Ditto -	10½	Ditto. Deceased was able to read and write.	–	–	1	–	–	–	–	–	–
„ 11	114	Weeg - -	Swansea - -	G. B. Morris - - -	Lewis Williams -	Ditto -	14	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
„ 16	115	Plymouth -	Merthyr Tydfil -	Plymouth Iron Co. - -	William Rees -	Ditto -	13	Ditto - - - - - -	–	–	1	–	–	–	–	–	–
„ „	116	Pontyclerc -	Llanelly - -	John Lloyd - - -	Thomas Jones -	Ditto -	21	Explosion of gas - - - -	1	–	–	–	–	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
Dec. 20	117	Cethin Cyfarthfa	Merthyr Tydfil -	William Crawshay - -	Vavasour Rees, and 33 more persons.	Colliers -	42	Explosion of gas. Verdict of manslaughter against the colliery manager, Mr. John Moody, and his assistant, William Davies.	34	–	–	–	–	–	–	–	–
,, 26	118	Tondû - -	Bridgend - -	J. Brogden & Sons - -	Richard Jones -	Sinker -	26	Fell off "baulk" whilst ascending the shaft.	–	–	–	–	1	–	–	–	–
								Total number of deaths in December	35	–	4	–	1	1	–	1	–

LIST of the FATAL IRONSTONE MINE ACCIDENTS, and LOSS of LIFE arising therefrom, in the SOUTH WALES DISTRICT, during the Year ended 31st December 1865.

Date.	No. of Accidents.	Name of Ironstone Mine.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1865. Feb. 7	1	Cyfarthfa	Merthyr Tydfil	Wm. Crawshay	Henry Davies	Miner	25	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 17	2	Gadlys	Aberdare	Gadlys Iron Company	William Bowen	Ditto	25	Ditto	–	–	1	–	–	–	–	–	–
								Total number of deaths in February	–	–	2	–	–	–	–	–	–
July 6	3	Ysqubor Wen	Ditto	Richard Evans	Morgan Price	Ditto	40	Explosion of gunpowder; when preparing to fire a shot, whilst stemming, it is conjectured the ram-rod struck a piece of ironstone, and the spark ignited the powder.	1	–	–	–	–	–	–	–	–
								Total number of deaths in July	1	–	–	–	–	–	–	–	–
Sept. 4	4	Cyfarthfa	Merthyr Tydfil	William Crawshay	John Jones	Ditto	55	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 6	5	Peny-darren	Ditto	Guest and Co.	W. Hopkins	Haulier	17	Ditto	–	–	1	–	–	–	–	–	–
								Total number of deaths in September	–	–	2	–	–	–	–	–	–
Nov. 6	6	Gadlys	Aberdare	Gadlys Iron Company	William Thomas	Miner	35	Explosion of gunpowder	1	–	–	–	–	–	–	–	–
„ 26	7	Ditto	Ditto	Ditto	Thomas Davies	Ditto	35	Fell under carriage at bottom of shaft.	–	–	–	–	–	1	–	–	–
								Total number of deaths in November	1	–	–	–	–	1	–	–	–

Mr. Moore's Report.

REPORT of the INSPECTOR of MINES and COLLIERIES in the EASTERN DISTRICT OF SCOTLAND, for the Year ended 31st December 1865.—By RALPH MOORE, Esq.

SIR, Cambuslang, February 28, 1866.

IN terms of the Mines Inspection Act, I have the honour to submit the annual report of my proceedings as Inspector of Mines, during the year ending 31st December 1865.

Each of the 52 fatal accidents enumerated and referred to in the accompanying schedule has been carefully inquired into on the spot.

Explosion

There were four fatal explosions which resulted in the loss of five lives.

The first of these, at Dalziel Colliery near Wishaw, caused the death of William Connor (No. 2 on Schedule). The deceased, just before commencing his work, went into a place of common resort, off the roadside, and some fire-damp which had lodged there ignited at his lamp, and he died in consequence of the injuries received. Previously to this fire-damp had not been seen there. He could not have got more than 19 feet from the roadside, because of a wooden stopping which separated the road from an old waste. It was part of the ventilating arrangements to send a current of air through this old waste, but the air-courses were out of repair, and I found the ventilation had been deranged by the opening up, a week before, of a communication with a new pit which had been sunk for the statutory second outlet. The fire-damp had probably accumulated at some heavy falls which were in the waste referred to, and had oozed through the wooden stopping into the place where the deceased exploded it. After the accident the air-courses were enlarged and a new ventilating furnace erected, and on my next visit to the colliery, a month afterwards, the ventilation was much improved.

The second fatal explosion was at Milnwood Colliery, within three miles of the last-mentioned place, and which resulted in the death of James Scott and Patrick Slemman (Nos. 14 and 15). A blind pit had been sunk from the main coal to the splint coal for a second outlet. The mine in the latter coal did not reach the pit for three days afterwards; meanwhile, owing to defective air-courses, fire-damp had accumulated in a mine in the main coal leading to the blind pit, and when the communication was effected this fire-damp flowed down the blind pit, ignited at the lights of the deceased, who were working in the splint coal, and both of them were fatally injured. This fire-damp should have been removed when the colliers were not in the pit.

The third accident (No. 20) occurred at the Victoria Pit, Wishaw, the property of the Wishaw Iron Company. The accident happened in the splint coal workings, which were newly opened up, and within a hundred yards of the shaft. There were not 12 men in the seam, and they were all on the opposite side of the pit from that on which the deceased was. It was evident that the explosion had come from the place where he had been working, and had been kindled by him, although in what way is somewhat doubtful. His body was found at his working place, and his Davy lamp was also found there unlocked and broken.

The fourth accident occurred in the same pit on the 14th of September, when John Winning (No. 34) was killed. After the previous accident the splint coal workings had stood until pumps were put in to draw the water. The deceased was one of the workmen engaged in putting in the pumps in the shaft. He went down on the cage to the splint coal with a naked light and ignited some fire-damp there and was killed.

Falls of r
and coal.

Twenty-one persons were killed by falls of roof and coal; 16 of these persons were colliers and miners, two were roadsmen, and three were drawers, one of whom was killed within the colliers' working limits. Further consideration on this subject leads me to the same conclusion that I have noticed in my former reports, that were the propping of the roof committed to persons specially appointed for that purpose by the employers, and not left entirely to the colliers, a saving of life would be the result.

Shaft
accidents.

Twelve lives were lost in shafts last year. Four of these accidents, Nos. 7, 26, 41, and 47, occurred by persons falling down the pit from the surface, and might have been prevented by the use of self-acting wickets or guards and gates. In the case of No. 26 and 47, these self-acting wickets had been adopted, but were under repair when the accidents occurred.

Miscel-
laneous
accidents.

Thirteen persons were killed by miscellaneous accidents. Two men, No. 38 and 39, were drowned in a sinking pit at Bredenhill near Airdrie. It was an old ironstone pit which was being sunk from the ironstone to the Virtue-well coal, and the sinking had proceeded 14 fathoms. There was no growth of water below the ironstone, and a dam was made in the strata at the level of the ironstone to collect the water, which was pumped up thence to the surface by a 6-inch pump, driven by the steam engine. The dam was constructed in the usual way, but it turned out that it was founded on a "slip" which ran through the shaft, and the shattered strata had gradually crumbled away without sufficient attention having been paid to it, and one morning it gave way, and the water running out, filled the pit to a depth of 20 feet while three men were in the bottom. One of the men saved himself by swimming until the kettle came down for him, the other two were drowned.

Non-fatal explosions.

In addition to the fatal explosions, 14 non-fatal explosions were reported and inquired into. These resulted in injury to 17 individuals. The injuries in some cases were severe, the sufferers having been laid up for several weeks, in others for only a few days, while some were very little injured. The statute very properly directs that all accidents from explosions shall be reported, and the attention of the inspector is thus called to any shortcomings in the means for ventilation.

The other non-fatal reported accidents were examined by me, where inspection seemed to be called for.

In two instances convictions were made for neglect of duty.

Conviction for culpable neglect of duty.

At Stirling in April last, William Burt, engineman, was sentenced by Lord Deas to 12 months' imprisonment for having, while in a state of intoxication, so mismanaged the winding engine of No. 17 pit, Redding Colliery, (on 3rd November 1864,) that the cage on which George Hunter was ascending was carried over the pullies and he was so much injured that he died.

In reference to this subject, I may mention that Mr. Henry Aitken, of Boghead and Blackbrace collieries, in this district, has fitted up an arrangement on one of the winding engines there for stopping the engine and preventing overwinding. It is simply a heavily loaded break, which is brought into action on the flywheel by a projecting pin on the indicator whenever the cage rises above the ordinary level.

Conviction for breach of special rules.

A complaint was made to me on November last, by Robert Mitchell, collier, Tillicoultry, Clackmannan, that the onsetter, or bottomer, of one of Mr. Snowdowne's pits there, had left him in the pit a few hours, and that the engineman had gone away also. The bottomer was prosecuted by the Procurator Fiscal, and he was tried before the sheriff for breach of the special rules, and fined 7*s.* 6*d.*, or ten days' imprisonment. The fine was paid.

The relatives of persons killed, have in two instances been awarded compensation for the loss sustained by them on account of accidents for which the proprietors were found blameable.

Compensation to a mother for loss of her son.

Mrs. Nochar, mother to William Nochar, who was killed on 13th July 1863, by overwinding at Braehead Colliery, sued Messrs. Charles Tennant & Co., the proprietors, for damages in name of reparation and solatium, for the loss sustained by her on account of the death of her son. Sheriff Henry Glassford Bell, of Glasgow, the judge, in his award "Finds that the pursuer is a widow, of 56 years of age, and the deceased, who was 20 "at the time of his death, resided with, and contributed to, his mother's support; the "wages he was earning, and which he shared with the pursuer, being about 20*s.* a week: "finds said pursuer entitled to reparation both for loss and in name of solatium, and "assesses the same at the sum of 80*l.* sterling, for which decerns against the defenders: "Finds them also liable in expenses, allows an account thereof to be given in, and remits "the same to the auditor of the court, to tax and report."

Mrs. Wilson, widow of Andrew Wilson, (No. 17 of Schedule,) who was killed at Cambusnethan Colliery, in May last, sued the proprietors for damages before Lord Jerviswoode and a jury. The issue which went to trial was as follows:—

Compensation to a widow and children for loss of a husband and father.

"It being admitted that the defenders are proprietors or lessees of the pit known as "No. 6 pit on the Cambusnethan estates near Wishaw: 'Whether on or about the 31st "'day of March 1865 the deceased, Andrew Wilson, the husband of the pursuer, Mrs. "'Agnes Russel or Wilson, and the father of the other pursuers (children), while "'employed by the defenders on the shaft of said pit was precipitated to the bottom "'and killed, in consequence of the breaking of the rope used for raising the workmen to "'the surface, from defect or insufficiency thereof, through the fault of the defenders, to "'the loss, injury, and damage of the pursuers.'"

The jury awarded damages to the extent of 176*l.* to Mrs. Wilson, and 50*l.* to each of the four children. The Defendant will also require to pay Mrs. Wilson's law expenses.*

Arbitration.

The special rules commonly used in Fifeshire, which were proposed for Killarnie Colliery, a non-fiery colliery, in the county of Fife, not being approved of by you, and the owner having objected to the alterations proposed, Mr. James Naysmith, coal master, Donibristle Colliery, was in usual form appointed arbiter to decide as to the special rules that should be established at that colliery. The rules proposed by you were the

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* A new trial has been granted in this case.—R. M.

Lanarkshire rules, which do not differ materially from the Fifeshire rules, except that the latter contain no provision for examining the working places before the workmen enter at the commencement of each shift. The arbiter did not order the rules proposed by you, but he made certain additions to the Fifeshire rules. The following is the most important: "Colliers are expressly forbidden to proceed towards or into their working "places at the commencement of any shift until it shall have been intimated to them by "the underground manager, or any person in that behalf, deputed by him for the time, "that the drawing roads to the working places have been examined and are apparently "safe to be entered. Until such intimation of the apparent safety of the pit shall have "been made, colliers shall remain at the place or places assigned for that purpose."

These rules are now established at the colliery.

I have endeavoured to introduce this important rule into the Fifeshire special rules, but have only partially succeeded. It is a rule so essential to discipline and to safety, that it is difficult to see why the masters should hesitate to adopt it.

This rule seems to me to be applicable to all collieries, and it, with several others, might, in my opinion, be made with great benefit—general rules, such for example as the propping of working places, as in the special rules of the north of England; the use of self-acting wickets at the surface, and gates on mouthings or openings into shafts; employment of onsetters and pit-head men when workmen are ascending and descending.

The past year has been one of uninterrupted prosperity in the coal and iron trades, and the miners and others connected with the various operations have had abundance of employment, at good wages.

I beg to append the usual estimate of quantities raised and persons employed, and

I have, &c.

RALPH MOORE,
Inspector of Mines.

The Right Honourable Sir George Grey, Bart.,
&c., &c., &c.

LOSS OF LIFE in COAL and IRONSTONE MINES.

Year.	Explosions.	Falls.	Shafts.	Miscellaneous.	Total.	Persons employed at coal.	Computed tons of coal raised.
1862 -	5	35	12	1	53	—	6,000,000
1863 -	3	29	12	4	48	—	6,000,000
1864 -	1	25	8	5	39	21,150	6,400,000
1865 -	5	21	15	11	52	21,150	6,400,000

COAL MINES.

1865.	Counties of				
	Lanark.	Linlithgow Stirling (E)	Edinburgh, Haddington.	Fife, Perth, Kinross, Clackmannan.	Totals.
Quantity raised - - Tons	3,540,000	933,000	619,000	1,308,000	—
Number of persons employed - - -	10,000	3,710	2,500	4,900	—
Quantity raised per person employed Tons	354	251	247	265	—
Lives lost - - - -	30	4	7	6	47
Persons employed per life lost - -	333	936	357	816	—
Tons of coal per life lost - - -	118,000	244,333	88,425	218,000	—
Lives lost by explosions - -	5	—	—	—	5
,, ,, falls of roof - - -	7	1	2	2	12
,, ,, falls of coal - -	4	1	—	—	5
,, ,, shafts - - -	7	1	3	1	12
,, ,, miscellaneous - -	6	1	2	2	11
Persons employed per life lost by—					
Explosions - - -	2,000	—	—	—	—
Falls of roof - - - -	1,428	3,710	1,250	2,450	—
Falls of coal - - -	2,500	3,710	—	—	—
Shafts - - - -	1,428	3,710	833	4,900	—
Miscellaneous - - -	1,666	3,710	1,250	2,450	—
Above ground - - -	10,000	—	—	4,900	—
Tons of coal raised per life lost by—					
Explosions - - -	708,000	—	—	—	—
Falls of roof - - - -	506,000	933,000	399,000	654,000	—
Falls of coal - - -	860,000	933,000	—	—	—
Shafts - - - -	505,714	933,000	206,000	1,308,000	—
Miscellaneous - - -	708,000	933,000	309,000	654,000	—
Above ground - - -	3,540,000	—	—	1,308,000	—

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS OF LIFE arising therefrom, in COAL and IRONSTONE MINES, in the EAST of SCOTLAND DISTRICT, during the Year ended December 31, 1865.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865. Jan. 9	1	Auchinheath	Lanark	Duke of Hamilton	John Brown	Overseer	—	Injured by a pipe falling on him in December 1864	–	–	–	–	1	–
,, 10	2	Dalziel	Ditto	John P. Kidston	William Connor	Drawer	20	Explosion of fire-damp	1	–	–	–	–	–
,, 11	3	Armadale	Linlithgow	Monkland Iron Company	Alexander Binnie	Collier	—	Fall of roof at face	–	1	–	–	–	–
,, 14	4	Cambusnethan	Lanark	John Sneddon	John Hammond	Ditto	48	A piece of top coal fell upon him while he was filling a hutch. Deceased had previously knocked out the prop which supported the coal and tried to take it down, but failing to do so he left it hanging in that insecure state, and commenced to fill his hutch. He had only been 18 months working in pits.	–	1	–	–	–	–
,, 19	5	Weymss	Fife	Mr. Weymss	Alexander Murray	Ditto	17	A fall of coal knocked out a prop and the roof fell upon him.	–	1	–	–	–	–
Feb. 4	6	Jerviston	Lanark	Summerlee Iron Company	David Adamson	Driver	14	Crushed by tubs. It was his first day, and he had not put in snibbles at the proper time.	–	–	–	1	–	–
,, 9	7	Carfin	Ditto	William Dixon	John Brown	Labourer	50	He ran an empty tub into the pit at the surface and fell after it, while the cage was at the upper scaffold.	–	–	1	–	–	–
,, 17	8	Gavieside	Edinburgh	West Calder Oil Company	Pat Campbel	Bottomer	25	He was ascending the pit, and attempted to jump off the cage at the surface before the engine stopped, and was squeezed between the cage and the scaffold.	–	–	–	1	–	–
,, 21	9	Coltness	Lanark	A. G. Simpson	Archd. Fisher	Collier	22	Coal fell on him while holing	–	1	–	–	–	–
Mar. 15	10	Oxenford	Edinburgh	John Christie	Charles Good	Drawer	12	He got entangled with incline chain, and was crushed to death on drum. There was no "brakesman."	–	–	–	1	–	–
,, 10	11	Springbank	Lanark	Springbank Coal Company	John Swan	Collier	24	Fall of roof at his working face	–	1	–	–	–	–
,, 9	12	Milnwood	Ditto	John Christie	John Shaw	Engineman	17	He fell among pumping machinery	–	–	–	1	–	–

List of Fatal Accidents in Coal and Ironstone Mines—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865. Mar. 15	13	Aitkenhead	Lanark	Provenhall Coal Company	John Lawson	Fireman	34	Fall of roof. He was taking out props to drop the stone between the pyotshaw and main coals.	–	1	–	–	–	–
„ 29	14	Milnwood	Ditto	John Christie	James Scott	Collier	28	Explosion of fire-damp	1	–	–	–	–	–
„ „	15	Ditto	Ditto	Ditto	Pat Slimman	Ditto	35	Ditto	1	–	–	–	–	–
„ 31	16	Cambusnethan	Ditto	John Sneddon	Andrew Hamilton	Sinker	35	The windlass rope being too short, with the consent of the manager they took it off, and put on an old "tackle fall," which broke as they were descending, the first trip; they both fell to the bottom and were killed.	–	–	1	–	–	–
„ „	17	Ditto	Ditto	Ditto	Andrew Wilson	Ditto	29		–	–	1	–	–	–
May 2	18	Cambusnethan	Ditto	John Sneddon	William Smith	Collier	22	Fall of coal	–	1	–	–	–	–
„ 26	19	Victoria Pit, Wishaw.	Ditto	Wishaw Iron Company	George Lindsay	Ditto	25	Explosion of fire-damp	1	–	–	–	–	–
June 14	20	Victoria Pit, Wishaw.	Ditto	Wishaw Iron Company	William Scott	Ditto	–	Premature explosion of gunpowder	–	–	–	1	–	–
„ 27	21	Rochsolloch	Ditto	George Cowie	David Blair	Sinker	30	Fell down sinking pit. The kettle caught the bottom of the midd-wall while he was ascending, and he was pitched out.	–	–	1	–	–	–
„ 28	22	Braehead	Ditto	Charles Tennant and Co.	John Strahan	Roadman	60	Fall of roof	–	1	–	–	–	–
July 8	23	Blackbraes	Stirling	James Russel and Son	John Forsyth	Brusher	42	He fired a shot with a "squib," it went off before he was out of danger, and he was killed by the falling stones.	–	–	–	1	–	–
„ 11	24	Raith	Fife	Lochgelly Iron Company	Hugh Roddie	Onsetter	30	He was "hanging on" at the bottom of an incline, and a stone from the top rolled down and broke his jaw. He died in Edinburgh Infirmary.	–	–	–	1	–	–
„ 18	25	Penston	Haddington	John Deans, junior	Peter Fiergrieve	Collier	45	Fall of top coal; want of spraggs	–	1	–	–	–	–
„ 22	26	Coltness	Lanark	A. G. Simpson	Donald Stewart	Boy	14	Fell down pit from surface. He ran a hutch into pit and fell after it. The self-acting wicket was out of repair and was not working.	–	–	1	–	–	–

List of Fatal Accidents in Coal and Ironstone Mines—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865. Aug. 1	27	Ravenscraig -	Lanark - -	James Anderson and Co. -	James Reilly -	Collier -	30	Crushed between cage and door head. He was putting a hutch on the cage, when the engineman mistaking the signal lifted the cage.	–	–	1	–	–	–
„ 3	28	Wellington Pit, Wishaw.	Ditto - -	Merry and Cunninghame -	James Mackay -	Ditto -	30	Fall on roof at face - - -	–	1	–	–	–	–
„ 7	29	Dalkeith Colliery	Edinburgh -	Duke of Buccleuch -	James Kay - -	Ditto -	–	Fell off cage while ascending pit -	–	–	1	–	–	–
„ 12	30	Arneston -	Ditto - -	John Christie - -	James Ross - -	Ditto -	17	Fall of coal from side of working -	–	1	–	–	–	–
„ 28	31	Cuttlehill -	Fife - -	Henderson and Wallace -	Wm. Adamson -	Driver -	13	Found under the wheels of the hutch. He had apparently slipped his foot and fallen in before the wheels.	–	–	–	1	–	–
„ 30	32	Pencaitland -	Haddington -	John Deans, junior - -	George Duncan -	Engineman	52	He went down the pit by means of a ladder to the top of the pumps, about 18 feet from the surface, and was suffocated by choke-damp issuing from an old coal waste. He went down against orders.	–	–	1	–	–	–
„ „	33	Ditto -	Ditto - -	Ditto - - -	Andrew Cairns -	Labourer -	36	Went to rescue Duncan, and fell beside him. Cairns worked at the same pit as Duncan, and seeing him lying so near the surface he thought he was unwell and went down the ladder to assist him, and was also suffocated.	–	–	1	–	–	–
Sept. 14	34	Victoria Pit, Wishaw.	Lanark - -	Wishaw Iron Company -	John Winning -	Sinker -	33	Explosion of fire-damp - -	1	–	–	–	–	–
„ 18	35	Pather Colliery	Ditto - -	Boyd and Spencer - -	Pat Killan - -	Collier -	65	Fall of roof - - - - -	–	1	–	–	–	–
„ 30	36	Overton Station	Ditto - -	Waddel and Louden -	John Curson -	Ditto -	–	Fall of coal. This man had only been two years in pits	–	1	–	–	–	–
Oct. 11	37	Dumbroider -	Stirling - -	John N. Buchanan -	John Jervie	Ditto -	–	Fall of roof - - - -	–	1	–	–	–	–
„ 28	38	Kipps-byre, Bredenhill.	Lanark - -	Dr. Robertson -	Robert Beveridge -	Sinker	–	Drowned in a sinking pit by the failure of the foundation of a dam.	–	–	1	–	–	–
„ „	39	Ditto - -	Ditto - -	Ditto - - - -	William Mitchel -	Ditto			–	–	1	–	–	–
Nov. 3	40	Quarter Iron Works.	Ditto - -	Cohn, Dunlop, and Co. -	John Swanbrick -	Collier -	45	Fall of roof. He had only been two years in pits.	–	1	–	–	–	–

List of Fatal Accidents in Coal and Ironstone Mines—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Person, killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1865. Nov. 25.	41	Sunnyside	Lanark	Archibald Russell	William Peebles	Labourer	50	Fell down pit from surface. He fell with a hutch when the cage was up at the upper scaffold.	–	–	1	–	–	–
,, 28	42	Cluny	Fife	William Clark	James Clark	Drawer	18	Fall of roof in the drawing road	–	1	–	–	–	–
,, ,,	43	Weymss	Ditto	Mr. Weymss	George Dryburgh	Labourer	66	Crane ran amain and the handle struck him. He did not understand its action, and threw it into "single instead of double power."	–	–	–	–	1	–
Dec. 18	44	Auchenheath	Lanark	James Ferguson & Co.	David Russel	Drawer	19	Fall of roof at road-head	–	1	–	–	–	–
,, 19	45	Sunnyside	Ditto	Archibald Russel	Joseph Young	Ditto	14	Fell in before wheels of hutches while riding on them against orders	–	–	–	1	–	–
,, 26	46	Comrie	Perth	Forth Iron Company	James Currie	Pony driver	16	Windlass rope broke when he was descending a blind pit. The rope had been 12 months underground and was quite useless.	–	–	1	–	–	–
,, 30	47	Bonhar	Linlithgow	George Simpson	Roger Blair	Labourer	45	Fell down pit from surface. Wicket under repair.	–	–	1	–	–	–
								Total loss of life in coal mines	5	17	14	9	2	47
					IRONSTONE MINES.									
Jan. 30	1	Gallowhill	Lanark	Dr. Robertson	Thomas Cleland	Miner	23	Fall of roof at face	–	1	–	–	–	–
Feb. 15	2	Boghead	Linlithgow	James Russel and Son	Charles Barclay	Contractor	30	Engineman allowed his engine to go the wrong way and took him over the pulleys.	–	–	1	–	–	–
May 21	3	Fauldhouse	Lanark	Thomas Thorburn	Thomas Munro	Miner	66	Fall of ironstone balls	–	1	–	–	–	–
,, 27	4	Bathville	Linlithgow	John Watson and Sons	William Taylor	Ditto	—	Fall of coal and ironstone at face	–	1	–	–	–	–
Sept. 20	5	Armadale	Ditto	Monkland Iron Company	Francis Higgins	Drawer	33	Fall of fireclay off roadside as he was passing by.	–	1	–	–	–	5
								Total loss of life in ironstone mines	–	4	1	–	–	5
								Total in coal and ironstone mines	5	21	15	9	2	52

Mr. Alexander's Report.

REPORT on the INSPECTION of MINES in the WESTERN DISTRICT OF SCOTLAND, for the Year ended 31st December 1865.—By WILLIAM ALEXANDER, Esq.

SIR, Glasgow, February 28, 1866.

I HAVE the honour to lay before you my Tenth Annual Report upon the mines and collieries in the West of Scotland.

No eventful or devastating incident of unusual magnitude has taken place throughout the different mining divisions of this district for the year now ended.

Generally the works have been fully employed.

The number of collieries in operation has been rather in excess of former years, 223, and, in the absence of correct returns, I estimate the quantity of coal produced from them to be 6,400,000 tons.

The fatal accidents in and connected with these works have amounted to 50, causing the loss of 54 lives.

In the schedule No. 1, annexed, these accidents are shortly described, and the following table, while it shows the quantity of coal obtained for the last 10 years, shows also the number of lives which has been sacrificed to produce it.

Year.	Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous and above ground.	Total Loss of Life.	Output of Coals.	Deaths per Million tons of Coal raised.
						Tons.	
1856	3	26	11	5	45	4,800,000	9·3
1857	8	16	13	4	41	5,613,473	7·3
1858	12	16	12	1	41	5,620,000	7·2
1859	10	25	10	2	47	5,700,000	8·2
1860	11	22	15	9	57	6,049,424	9·4
1861	4	21	7	5	37	6,100,000	6·
1862	3	26	5	4	38	6,200,000	6·1
1863	4	19	5	4	32	6,300,000	5·
1864	5	15	11	4	35	6,300,000	5·5
1865	9	28	6	11	54	6,400,000	8·4

In the ironstone mines of the coal measures, and worked in connexion with coal, or with any disused or exhausted coal mine, the fatal accidents have amounted to nine, causing the loss of 14 lives.

The particulars of these accidents are described in schedule No. 2, and the following is an abstract of the loss of life in ironstone mines for the last five years:

Year.	Explosions.	Falls of Ironstone and Roof.	In Shafts.	Miscellaneous and above ground.	Total Loss of Life.
1861 - -	—	6	3	4	13
1862 - -	1	4	9	6	20
1863 - -	2	6	5	5	18
1864 - -	1	5	3	5	14
1865 - -	2	4	5	3	14

The total number of accidents in the collieries has been greatly increased for the past year.

From explosions of fire-damp, seven in number, nine lives were lost. While referring to this class of accidents, it is proper to observe that the majority of them were occasioned by the carelessness or incapacity of the persons intrusted with carrying out the details of management. I refer in particular to the firemen and their assistants, five of whom have been deprived of life wholly through their own rashness.

The workmen, however, are in my opinion becoming more alive to the necessity for observing precautionary measures where fire-damp is known to exist.

It is of importance that they should thoroughly understand, in fiery mines in particular, that a considerable responsibility rests with themselves. The special rules provide that they shall not enter to their work till after the fireman has made his examination and intimated to them that the working places are apparently safe to be entered. They should strictly adhere to this, and on no account allow such an important regulation to be violated, and in case of neglect they should take the first opportunity to communicate with the responsible agent in the colliery regarding it.

From observation, and coming constantly in contact with the persons who act as firemen, I would suggest for the consideration of employers, whether it might not be an improvement to raise the standard of this important class of workmen. Their business is a disagreeable one, they descend the mine early in the morning, and, in the majority of cases, make their dreary round of inspection alone. There is no one to check them during their examination, and the colliers trust implicitly to their report. Whilst their responsibility is great, as a rule their remuneration is less than the ordinary earning of a collier.

If firemen were more careful and considerate, their example would have an improving effect upon the workmen, and, in matters relating to fire-damp, would aid materially in maintaining the discipline of the mine.

The loss of life from falls of coal and roof exceed any bygone year; it is considerably beyond the average, and is 90 per cent. more than for 1864.

The accidents of this description are the most numerous and destructive which beset the miner whilst pursuing his perilous occupation; and it is humbling to admit that hitherto little or no advance has been made towards their prevention.

I cannot assign any cause for the extraordinary loss of life from falls of coal and roof, and, so far as I know, the precautionary measures hitherto observed by the workmen have not been neglected during the year now gone.

The shaft accidents, six in number, are considerably under the average of former years, and considering that there are upwards of 300 shafts where persons are lowered and raised daily, I am inclined to think that the minimum in this department has been nearly reached.

The accidents miscellaneous and above ground are numerous, and show in what a variety of ways persons employed in and about mines may receive injuries. Two fell off trains of loaded hutches and were crushed before they could be extricated; one was squeezed upon a "rise" road between his hutch and the roof of the mine, and two were run over by hutches. On the surface two were fatally injured by getting entangled with the machinery; one was jammed between two waggons at the "screen;" another was struck by a guide rod falling upon him at the pitmouth, and a mechanic, while engaged upon a pithead framing, lost his hold and fell into the shaft.

Several accidents have taken place in ironstone mines which do not come within the scope of the Mines Inspection Act. These were all reported to me at the time, either through the owners of the mines or the Procurators Fiscal, and I examined the works and furnished reports to the crown office regarding them, but they do not appear in the return of accidents in ironstone mines, schedule No. 2.

The following table exhibits the casualties of a non-fatal kind which have taken place throughout the coal and ironstone mines of this district for the last four years.

Year.	Explosions.	Falls of Coal, Ironstone, and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total of Non-fatal Accidents.
1862	84	85	11	35	6	221
1863	88	97	10	38	6	239
1864	105	117	10	27	7	266
1865	74	79	8	32	10	203

Apparently there has been a reduction, as compared with past years, and the total, 203, is the smallest number I have had occasion to report.

The Act 25 & 26 Vict. c. 79 has been in full operation for 1865. The majority of shafts referred to in my last report, for which time was allowed to complete the connexions, are now working in compliance with the statute. However I cannot report that connexions have been made in every case, and the Lord Advocate in April last instructed the Procurator Fiscal, Kilmarnock, to take proceedings in the Sheriff's Court, in two cases, for the purpose of enforcing compliance by interdict or injunction. As was expected, under the circumstances, objections were taken to the jurisdiction of the sheriff, and to the title of the Procurator Fiscal to sue, as well as upon other technical points, for the purpose of protracting the litigation and delaying the decision.

After these preliminaries were overruled and a proof led for both parties, the

Sheriff Substitute, Kilmarnock, issued his interlocutor, which is herewith annexed Appendix No. 1.

An objection has been urged, with an apparent fairness, to the working of the Act, in so far as that a certain amount of time is allowed to explore or connect two shafts, that in cases where the shafts are at some distance from each other a reasonable time should also be allowed to finish them, such as working with a limited number of men while taking out the pillars which may have been formed for the purpose of maintaining the connexion.

Of course the Act does not provide for such an arrangement, it would be difficult to check, and might possibly lead to looseness. As it is, where the pits are situated at some distance from each other, if the parties choose to take out the coal, by which the opening or communication is maintained, it will be necessary to introduce buildings for the purpose of preserving the connexion.

An erroneous opinion seems to have been formed by some owners, particularly at small isolated works, to the effect that in a pit where there are not more than 19 men employed, it is not necessary to provide a second shaft or outlet. Upon this point, however, the Act seems sufficiently clear. In case of a new shaft sunk to a seam of coal regarding which there is any uncertainty, it provides that the owner shall have a fair and reasonable time allowed to explore with a limited number of men before incurring the expense of providing a second shaft or outlet; and for the purpose of connecting two shafts it also provides that the workmen shall not exceed a given number while forming such a communication. But it was never meant that the number of men, if limited to 19, should do away with the obligation for providing a second shaft or outlet. There could be no reasonable pretext for such an arrangement, and it is difficult to conceive why 19 men under similar conditions should be less cared for than 20.

In carrying out the general rules, it sometimes happens that a difference of opinion exists as to the interpretation of the terms used in them. The owner of Garthamloch Colliery, near Glasgow, was some time ago extending his operations in two seams of coal, locally known as the "splint" and "virgin" seams, towards an old and abandoned waste, known to contain a large quantity of water. I had occasion to know a little of the abandoned collieries around it, and was fully aware of the risk he was incurring in extending his operations in the direction of the old waste without any correct record of the limit or extent of it. By the 15th General Rule "sufficient bore holes shall be kept in "advance, and, if necessary, on both sides, to prevent inundations in every working "approaching a place likely to contain a dangerous accumulation of water." In this case the owner contended that he rendered a full compliance with the statute if he kept *one* working place in advance, and approaching the waste with bore holes in the same—that is, one bore hole right ahead and one on each side. To this I objected, and the Lord Advocate authorized the Procurator Fiscal, Glasgow, to take proceedings in the Sheriff Court. The case went to a proof, and the points were argued before Sheriff Substitute Strathearn, of Glasgow, who has had considerable experience in mining matters, and took much interest in the question; his interlocutor is given in Appendix No. 2. The defender appealed to the Sheriff of the county, Sir Archibald Allison, who, after hearing parties, adhered to the decision of Sheriff Strathearn; and his interlocutor is given in Appendix No. 3.

This general rule is a very important one, and it is difficult to understand how *anyone* can be more interested than the colliery owner in carrying it out. In advancing with mines in the direction of a large body of water, the existence of the colliery, independent of the more important consideration, the lives of the workmen, may in many cases depend upon the care and caution with which the water is approached.

If the construction which was attempted to be given to the Act in this case had been accepted as correct, it would have authorized by statute what was never attempted under the old system, where common law held that due precaution or common prudence should be observed by the owners of mines in dealing with such difficulties.

I think it is but just, however, to add that this is the *only case* where the owner of a mine in this district has contended for such a definition.

There is fortunately a wholesome dread of waste water under such circumstances, and colliery owners generally are anxious to avoid the risk of a sudden irruption, and are willing to adopt such means for safety as, humanly speaking, may preclude the question of doubt.

The following cases taken from schedules 1 and 2 will be found more minutely detailed. They have been selected for the purpose of attracting the attention of persons engaged in carrying out the details of management, and they in some cases show the painful consequences arising from trifling acts of mismanagement, rashness, and neglect.

Accident No. 1, schedule No. 1, was occasioned by the rope upon the crane slipping round the drum while the deceased was being lowered in the shaft.

This colliery is 120 fathoms deep. It appears that on the day of the accident, after the workmen had been lowered to their work, and the day's output had commenced, that an accident happened to the winding machinery. Various parts of it were broken, and for a time rendered unfit for use. Under the circumstances a scaffold was constructed and attached to the crane rope for the purpose of raising the workmen. I understand that the end of the rope was lashed to the drum of the crane, or fastened to it with white rope, so as to prevent it from slipping. After the necessary operations had been completed, the deceased and a neighbouring workman were lowered upon a scaffold by the crane and rope. In this way they proceeded for 90 fathoms, or to within 30 fathoms of the bottom, or thereby, when suddenly the rope upon the drum slipped, or began to revolve round it, and the scaffold was precipitated down the shaft with considerable velocity. The deceased appears to have lost his balance, as it is understood that he fell to the pit-bottom before the scaffold reached it.

The cause of accident was the rope slipping upon the drum. There was a "gland" for the special purpose of *securing the rope to the drum*, instead of lashing it with rope as above described, but unfortunately it was not used in this case.

In practice, such a fastening with white rope is sometimes made, but it is *not a safe one.*

Accident No. 11, schedule No. 1, was occasioned by an explosion of fire-damp.

The deceased was a collier. His "plane" had been driven up the length of the "stoop;" it had been standing for about four weeks; occasionally a small quantity of fire-damp gathered along the extreme "rise" of it, and at the time of the accident he was engaged putting over an "end" upon it. No doubt the deceased was acquainted with the state of the "plane;" he had gone into it for the purpose of obtaining an idea of the extent of coal to cut, when in some way his light, which he had left at some distance behind him, ignited the fire-damp, and he was burned.

The "plane" was not at the time in the act of extension, and under the circumstances it was the duty of the fireman to place a fence across the entrance leading into it, or to properly ventilate and dispel the gas.

Accident No. 12, schedule No. 1, was occasioned by an explosion of fire-damp.

The deceased was the regular fireman for the pit, and it was his duty to examine the workings in the morning before allowing the workmen to enter them. It is supposed that he made an examination of a limited division of the pit on the morning of the accident, and after reporting regarding the state of *it,* passed on to examine places situated to the "rise" of that division, but disconnected by a dislocation.

From the evidence of the workmen, it appears that he had with him at the time an unprotected light and a Davy lamp both burning. It is very likely that he had been in the habit of carrying an unprotected light along with him while travelling along the main roadways and other openings considered safe, and using the safety lamp only as he approached the faces, or places where fire-damp was likely to be met with. It is almost certain that on the present occasion he had used an unprotected light imprudently, and from some derangement of the ventilation, by broken brattice or otherwise, he had unexpectedly met with a body of fire-damp.

A fireman while making his round of examination in the morning should constantly suspect danger, and as directed by the Special Rules, all such examinations should be carefully made with a safety lamp, and there is no other safe way.

Accident No. 19, schedule No. 1, happened while the deceased was being drawn up the shaft.

Solesgirth Colliery is 50 fathoms deep. The shaft arrangements are of the usual description. It is fitted with cages and conductors, and the machinery is arranged to pump water and wind materials. McLachlan, who was the reputed oversman, had, on the day of the accident, been cleaning the "sump" (the bottom of the shaft), and after having finished it he had requested the "bottomer" to make the necessary signals to the engineman to draw him to the surface. Love, who happened to be near the pit-bottom at the time, waiting to be taken up, went on to the cage along with him, and it was raised accordingly.

It did not appear that any derangement from breakage of guides or otherwise had taken place in the shaft, and the deceased were drawn up to within a few feet of the surface before anything unusual occurred, when a noise was heard as if those on the cage wished the engine stopped, which was done, and in a few moments after the deceased fell to the pit-bottom, a distance of 45 fathoms or thereby.

I made a careful examination of the shaft and fittings, but could not discover the cause of accident. It is an unusual thing for two men to fall away from a cage while being drawn up in a shaft, apparently without any cause, as the cage and winding apparatus remained entire and in working order. Of course there must have been some cause, and probably the most likely was, one of the sufferers got caught by a "bunton," and his neighbour, in attempting to assist him, had in some way got entangled with the shaft fittings, and was dragged off the cage with him.

Accident No. 21, *schedule No.* 1, *was occasioned by the deceased attempting to get on to the cage when in motion.*

Robertson, the deceased, was a young lad, and worked along with his father, who was a collier. It appears that on the day of the accident, about 3 o'clock, p.m., that he and his father, along with a number of the workmen, had left off work and were drawn to the surface. One of the drawers had been requested by the hillman to return to the pit-bottom to send up a few more loaded hutches, which were required for some particular orders. Robertson proposed to accompany him; the drawer got on to the cage and gave the descent signal. On the engine being set in motion to lower the cage, the deceased, who was standing near to the pit-mouth, suddenly attempted to get on to it, but, either by stumbling or missing his footing, fell on the cage and past the side of it before he could be rescued.

Accident No. 28, *schedule No.* 1, *was occasioned by an explosion of fire-damp.*

The deceased was sometimes employed to assist the fireman Brown, and on the morning of the accident I understand that they were in the act of examining the state of the colliery, when a quantity of fire-damp was ignited at one of their lights.

The duties of a fireman are most important, and ought to be performed with the greatest of care. It is understood that his examination in the morning is made strictly with a safety lamp, and when it is considered that the ventilation of a mine is subject to many derangements, such as from damaged stoppings, trap doors partly left open, air-courses partially closed, &c., and from either of which the ventilation may be suddenly diverted, the necessity for such an arrangement will be at once apparent.

In the present case I have no doubt that the fireman and the deceased had, contrary to the regulations of the colliery, been making their examination with an unprotected light, when they unexpectedly came in contact with a body of fire-damp.

Accident No. 29, *schedule No.* 1, *was occasioned by an explosion of fire-damp.*

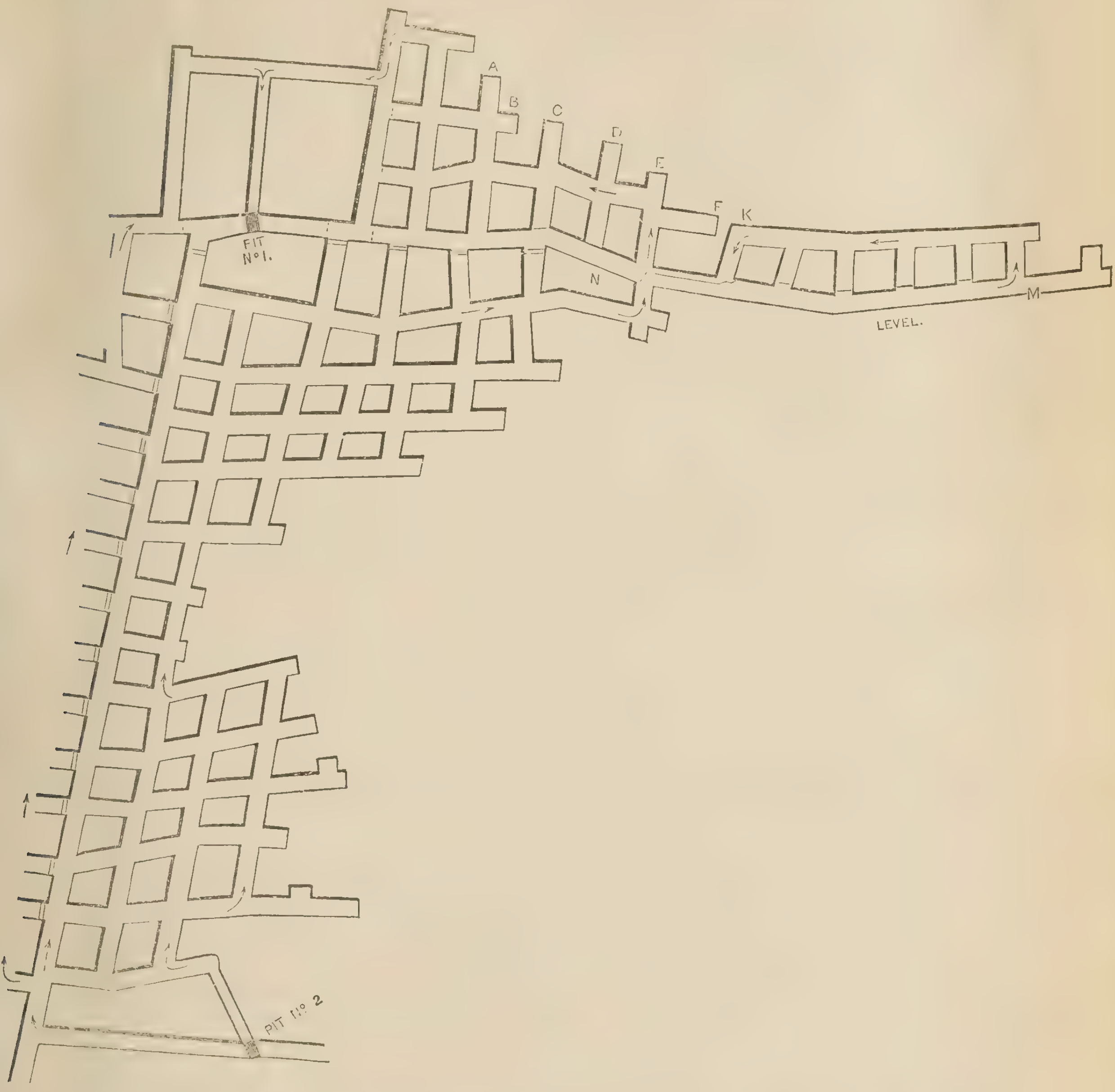
The workings of this colliery, in the Splint coal seam, situated to the rise of No. 1 pit, are limited; they had been resumed a short time before the accident, and were confined to the places marked on sketch A B C D E F (*see* p. 14).

It was the duty of the fireman to examine the working places before the shift (a night shift) of workmen were allowed to commence to their work.

I understand that the fireman, on the night of the accident, had made his usual examination, and informed the deceased and others regarding the state of the ventilation, in their working places, before they were allowed to enter them. The deceased and his neighbour worked in the "end" F, and with the exception of the "plane" E it does not appear that the fireman had discovered fire-damp in any other working place. It was explained by some of the workmen, that after working or being in their places about an hour, they had met in the "end" F to smoke, or otherwise, and after remaining there for some time, the deceased left them, as they understood, to go round into the place K to "chap the coal," (a customary and rough mode of judging from the sound of the thickness of solid coal existing between two places near to each other,) when shortly after an explosion of fire-damp took place.

Two of the workmen state decidedly that the deceased went *down* the "plane" from them as if he had been going to the place K, and that he had no time to go anywhere else, judging from the time he left them till the time the explosion took place. The fireman asserts there was no fire-damp in the place K when he examined it, and he never knew of fire-damp being lodged in it; and he was of opinion that the deceased, instead of going down the "plane" as described by his neighbour, had gone up the "plane" and into the fire-damp which he had cautioned them regarding at E.

I made a careful examination of the works, and in particular with the view of testing these reports. I could not discover fire-damp between the level M and the place K, and as the opening between these two points along the solid coal formed the aircourse, it is difficult to conceive how fire-damp, at least in quantity, could be lodged at the place K. Assuming that the brattice and stoppings were entire, and judging from the position in which the body of the deceased was found at N, the theory that the fire-damp was ignited to the "rise," it may have been at E, seems to me the most likely one.



Accident No. 31, *schedule No.* 1, *was occasioned by an explosion of fire-damp.*

According to the regulations of the colliery, the fireman had examined the pit on the morning of the accident, and reported to the workmen regarding the condition of their places. The workings were but limited, and the level to the west of the pit, and an "end" off it, had been abandoned for some time previous to the accident, and it was well known that fire-damp existed in them.

It appears that the contractor or person in charge of the pit had arranged with the deceased, Fingland, to commence and work in the "end" off the level above referred to, for the purpose of forming a connexion with a place to the "rise," and thus extend the circuit of ventilation. A pair of "fanners," rather a primitive contrivance, had been constructed at the foot of the "end," on the side of the level, for the purpose of forcing air into it and dislodging the fire-damp.

The deceased, Fingland and Brown, and the contractor, were, I believe, the only persons in the level, and near to the foot of the "end," when the explosion happened.

The "fanners" had only been in operation for a short time, less than a quarter of an hour. There was no open or unprotected light in the place, the only light used being a Davy lamp. There might have been a difference of opinion as to how the accident happened, seeing that the dislodged gas was understood to pass off in to the return current and clear of any open lights, and in consequence of the strong current of air it could scarcely pass any other way; but James Fingland, brother of one of the deceased, who commenced to work in the room to the "rise" about a quarter of an hour before the explosion, states that there was no fire-damp in his place when he commenced to work, and this is confirmed by the fireman, that on passing with his lamp on his head, about six feet back from the face of his place, he observed the fire-damp to ignite at it, "flare along the roof," and immediately after the explosion took place.

As all the other parts of the pit were well ventilated, I cannot think that the contractor did this negligently, but otherwise it betokened a want of judgment. No doubt he expected to dislodge the fire-damp and keep it clear by the action of the fanners, till once a connexion was made with the place to the "rise," when of course the circuit of air would be extended. Under the circumstances the proper way would have been to lead a current of air into the abandoned opening with brattice, (which by the way was very much fallen) and practically speaking, there was no other secure way.

The contractor, Hamilton, has been severely burned, but apparently he was the only person to blame.

Accident No. 37, *schedule No.* 1, *was occasioned by falling from a mid-working.*

There were two seams of coal being worked in this pit, the main at 33 fathoms, and the "Wee" at 44 fathoms. The deceased was bottomer in the main coal seam. It was his duty as bottomer to see the coals properly placed upon the cage, and to give the signals when men or materials required to be raised or lowered. There was no fixed scaffold in the shaft at the level of the main coal; but when the cage required to be lowered to that level "faulding boards," constructed in the shaft, were brought into operation by the bottomer for the cage to rest upon.

The accident was occasioned by the unfortunate sufferer pushing a loaded hutch of coal forward into the pit before the cage was lowered to receive it, and falling to the pit bottom with it a distance of 11 fathoms.

Mid-workings are dangerous, and where two seams are worked out of one shaft, if practicable, it should be arranged to have a scaffold over one of the divisions of the shaft, at the upper or mid-working, leaving the other open but fenced off, so as to prevent any person from falling into it.

Accident No. 43, *schedule No.* 1, *was occasioned by an explosion of fire-damp.*

There were two firemen, Ferril and McLeish, employed to examine this colliery before the workmen were allowed to enter to their work.

It appears that these men had been lowered into the mine early on the morning of the accident, and they had proceeded together to a part of the mine where branch roadways led into their different districts. From the explanation of McLeish, the deceased (Ferrie and Yuile, a brusher) parted with him there, and at that time they were carrying open or unprotected lights with them. He (McLeish) went straight in to the working places, not far distant, but had not examined more than three or four of them when an explosion of fire-damp took place; he did not see the flame, but felt the effects of the blast.

Judging from the place where the deceased were found, I am of opinion that the explosion took place before they (Ferrie and Yuile) reached the face of the working places. Apparently they had been proceeding with their open lights to a *known platform*, about nine or ten yards beyond where the accident happened, and where the air was in part split. As the mine in which they were travelling formed the direct and main airway, they must have assumed that the ventilation would be satisfactory and safe, at least to *that* point, the platform referred to.

It scarcely admits of a doubt that they had continued to use their unprotected lights after parting with McLeish, as the safety lamp, which had been trimmed with a new wick, was afterwards found near to them and had not been lighted.

Examining a pit in the morning with an unprotected light seems such an absurdity, that were it not for such proofs as the present, it might be doubted whether any person accustomed to mining could be found foolhardy enough to do it.

Accident No. 45, *schedule No.* 1, *was occasioned by a fall of roof.*

The deceased were roadsmen. It appears that on the day of the accident they had been engaged making a roadway through a part of the "waste" which had been abandoned for a considerable time.

Though the roof at this place was comparatively good there was a thin "ply" immediately above the coal, which generally required to be supported or taken down.

The deceased were at the time of the accident engaged taking this part of the roof down. I understand that McMeiken had driven out one of the old supports originally placed to secure it, when immediately after a part of the thin ply fell upon him. August and a neighbouring workman, Wilson, had without delay bravely rushed in to rescue their companion, when a second fall of roof took place which covered them all. McMeiken and Angus were fatally injured, but Wilson escaped, though severely bruised.

Accident No. 49, schedule No. 1, was occasioned by an explosion of fire-damp.

By Rule XXI. of the special rules of the colliery it was the duty of the fireman, Ramsay, to examine the works in the morning before the workmen were allowed to enter them, "and in case fire-damp or other impure air shall be discovered in any working " place, road, or level, the fireman shall, in the first instance, thoroughly clear the same " of such impurity, if that can be done easily, and shall thereupon report to the colliers " that the working places are apparently safe; but if the impurity cannot be readily or " at once cleared out the colliers shall not be permitted to enter any such working places, " roads, or levels until the impure air shall have been by further appliances entirely " dispelled," &c. But instead of observing this important regulation, I understand that after a number of the workmen had entered to their work he commenced with some others to dislodge a quantity of fire-damp, which had accumulated during the night in a "plane" and "end," by "waffing" it out, and coming in contact with an unprotected light placed a short distance back from the face of the "plane" an explosion was produced, by which he and the persons assisting him were severely burned, and the deceased, Thomson, a roadsman, died from the effects of it a few days afterwards.

Accident No. 1, schedule No. 2, was occasioned by an explosion of fire-damp.

The deceased was a miner, and the place where he worked was being pushed forward by two shifts in the 24 hours. It appears that on the morning of the accident he had descended with the fireman to commence upon the first shift.

The fireman had proceeded to examine a place in the immediate vicinity of the deceased's wall, at least not far distant from it. There was a place defined where the deceased should have remained till after the fireman had completed his examination, but instead of doing *this* he had gone *in* during the fireman's absence to his working place, and ignited some fire-damp which had collected in it.

Had the precaution of preventing the descent of workmen till after the fireman had made his examination, and signalled to the surface to that effect, been observed, this unfortunate occurrence would have been prevented.

Accident No. 2, schedule No. 2, was occasioned by a fall of roof.

This is one of the most painful accidents that has taken place throughout the mines of this district for a number of years. The deceased (three of them) were young lads about 16 years of age each, and they worked with their parents in one of the usual working places of the pit.

It appears that at the time of the accident they had been engaged at the face of their "wall" undermining, when a mass of roof, right over where they were working, fell and buried them under it.

Accident No. 3, schedule No. 2, was occasioned by the cage getting out of the guide rods while being raised.

This pit is of the form peculiar to Scotland; there are two divisions separated by a partition of wood, and these are fitted with guide rods and cages for winding purposes.

On the day of the accident, and a short time before it took place, I understand that the guide rods in the dip end of the shaft had got partly displaced, so much so that work was wholly suspended in that division. It appears that as soon as the winding apparatus had been got disconnected from the cage in the dip end that the necessary preparations were made for the workmen to ascend in the "rise" division. The contractor, who was in the pit at the time, ascended first with one of the workmen, it is alleged, for the purpose of examining the "rise" end, so as to make sure that the displacement or derangement in the dip end did not extend to it also. It does not appear that they discovered any defect; they were safely raised, and the cage was returned in the usual way for the workmen to ascend. Eight "loads" of men were drawn up after the manager made his examination, and the bottomer and his two companions were the last of the workmen requiring to be raised.

The accident happened while they were in the act of being drawn up, about 18 or 20 fathoms from the bottom, by the cage being drawn partly out of the guides.

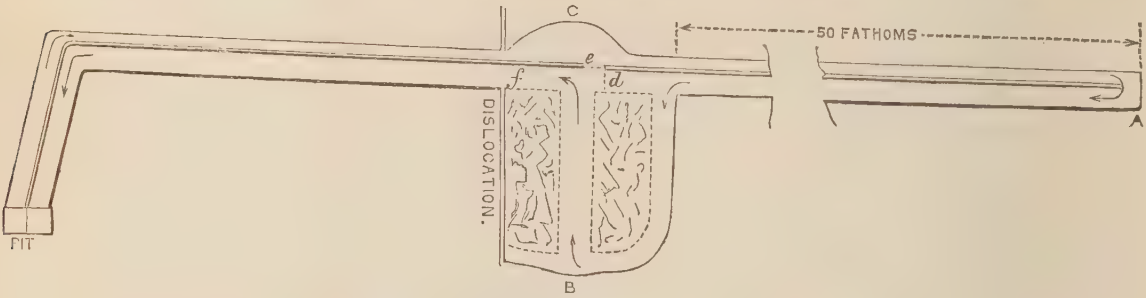
The person who descended first after the accident to get at the cage found it entire, but out of the guides; he put it into its place and was drawn up with it to the surface. The cage being very little out of place, not more than four inches at the extreme point, it is difficult to understand how three persons could fall away from it. I am inclined to think that under the excitement they must either have been attempting to get off the cage by the end of the pit by stepping on to the "buntons," or that one of them had stumbled and got entangled with his fellows and drawn them with him.

It is possible that by a more minute examination the defect that led to the accident might have been detected. I am not prepared, however, to state that the examination was either hurried or incomplete, and it is no doubt a fact deserving of consideration that the manager was one of the first to face the danger, and that the eight "loads" of men which followed him were drawn safely to the surface.

Accident No. 9, *schedule No.* 2, *was occasioned by an explosion of fire-damp.*

The sinking at this mine had been completed a short time before the accident, and the works were of a preparatory kind, consisting of an exploring mine, with two levels (just commenced) off it.

Referring to the sketch, A is the face of the exploring mine, and B C are the levels being opened up off it. The ventilating arrangements were simple. The air passed along one of the divisions of the mine, separated from the return by a wall of brickwork. It was directed in to the level B by a screen placed across the return at *d*, and from *that* it was returned to the upcast shaft at the pit-bottom.



One of the persons injured had, I understand, a contract to drive the levels B C two shifts in the 24 hours.

He had two miners and a drawer working in the level C on the morning of the accident, and the shift of men appointed to relieve them had just reached their place, C, a few minutes before the explosion took place.

I do not know that the two men who worked in the level C during the night had been aware of any defect in the ventilation, and I understand that their drawer had drawn the materials worked out by them to the pit-bottom in the usual way. While filling the material into the hutches they required to lift or partially open a screen placed in the brick wall at *e*. From the explanation of the oversman and Kelso, one of the men injured, the screen *e* was rolled up when they went *in* at the time the shift should have changed.

The oversman, knowing that this screen when open had the effect of directing the air off its usual course, had put it down, when a short time after the deceased, Thomas Hamilton, who was pushing a hutch into the mine near to *f*, ignited a body of fire-damp.

The provisions for ventilating this limited work are such as are usually made under such conditions.

It was known that a small quantity of fire-damp had a tendency to collect in a high part of the roof near to the face of the level B. If the screen *e* had been kept open for an unusual length of time, it is apparent that the ventilation beyond that point would become nearly stagnant, and fire-damp, if given off, would accumulate between the level C and the places A B, which on the ventilation being restored by the screen being put down, the fire-damp would naturally be driven out into the main return, and might be ignited, as in the present case, at the deceased's unprotected light at *f*.

Irrespective of care, and notwithstanding that a number of the accidents (more minutely detailed in the foregoing) have happened through rashness or incaution on the part of the sufferers, mining under the most favourable condition is a dangerous occupation, and, practically speaking, it will *never* be possible to exempt the persons employed in mines from the accidents peculiar to their calling.

It may be assumed that on an average 1,000 persons are killed annually by accidents in and about mines in Great Britain; of these probably three-fifths are married men, and the widows and helpless children left, who were dependent upon them for support, number not fewer than 2,500.

From a familiar acquaintance with these unfortunate calamities, and from a knowledge of the sufferings and privations which in many cases result from them, I have often thought what a blessing it would be if some more certain provision could be made for the widows and children of miners who by such distressing visitations are left destitute and unprotected.

The question has frequently been mooted, but more directly as a consideration for the employers and employed than for the general public.

It is doubtful, however, if a matter of such magnitude could be properly met by private aid. I am not aware that the owners of mines are illiberal, indeed in many cases they are quite the reverse; but independent of the desire to relieve the families of their unfortunate workmen, there are many of them so situated that they cannot do so. As a class, miners are not proverbial for habits of thriftiness; they marry early, and many of them are cut off suddenly in youth by accidents, or are otherwise disabled at a time when their families are young and helpless, and before they could possibly have had an opportunity to make any provision for them.

The object is comprehensive—private charity cannot overtake it. I humbly submit, therefore, that as the products of mining are indispensable for to keep in motion the industry of this country, and as fatal accidents in mines are unavoidable, that some public fund, or, what would be more workable and would not press upon the liberality of any class in particular, that the taxation of the country, either through some system of insurance or otherwise, should to a certain extent be made available for the support of the children of colliers who have met violent deaths in mines, until such children are 13 years of age, and also that some provision should be made for the needy and bereaved widows.

In carrying out such a scheme there would no doubt be many difficulties, but they are not insurmountable. The Hartley Colliery Relief Fund was a practical experiment upon a liberal scale, and the same system of relief carried out in a general way could be greatly modified and still be of incalculable benefit to many a poor suffering family.

I have, &c.
WILLIAM ALEXANDER,
Inspector of Mines.

To the Right Hon. Sir George Grey, Bart.,
Her Majesty's Secretary of State, London.

APPENDIX No. I.

INTERLOCUTOR, I. C.

Proc. Fiscal, Kilmarnock, *v.* The Owners of Maxwood Colliery.

Kilmarnock, January 31, 1866.

The Sheriff Substitute having heard parties procurators on the import of the proof adduced, and having resumed consideration of the process, finds that the present petition for interdict is presented by the Procurator Fiscal of court for the public interest, and seeks to have the Respondents interdicted from working the Nos. 1 and 2 pits of the Maxwood Colliery in contravention of the Act 25 & 26 Vict. c. 79, which prohibits single shafts. Finds that at the passing of said Act (August 1862) the coal pits in question were in the sense of the Acts " existing mines," being both worked at that period, and that they have been going coal pits ever since. Finds that in the sense of the principal Act 23 & 24 Vict. c. 151, with which the foresaid Act is incorporated, the Respondents are the " owners " of the said coal pits or mines, and have been so since December 1863. Finds that since the 1st day of January 1865 the Respondents have employed persons in working within both of said mines, or permitted persons to be in both of said mines for the purpose of working therein, while there was only one shaft or outlet to each. Finds there are two seams of coal worked in both of said mines, one called the *major*, being the upper seam, and the other called the *main*, being the under seam, and 20 fathoms below the *major* seam. Finds that in May 1864 the Respondents commenced to form a communication between the workings of the *main* coal of said mines or coal pits Nos. 1 and 2, and that the same has been completed since the Petitioner's proof in this case was closed, so that now the requirements of the statute are complied with, as regards the workings of the main seam of coal in both pits. Finds that no attempt has ever been made to form a communication between the workings of the major seam of said pits, or otherwise to comply with the requirements of the statute as regards the major seam, and that the Respondents still continue to employ persons in working the major seam in both pits, or permit persons to be in said mines for the purpose of working therein, and in violation of the statute thereanent.

Therefore interdicts prohibits, and discharges the Respondents from employing any person in working the major seam of said mines, or permitting any person to be in the major seam of said mines for the purpose of working therein in future, or until there are at least two shafts or outlets separated by natural strata of not less than 10 feet in breadth, by which distinct means of ingress and egress may be available to the persons employed in the major seam of each of said mines. Finds the Respondents liable in expenses, allows the Petitioner to give in an account thereof, and remits the same when lodged to the auditor to tax and report, and decerns.

(Signed) THOMAS ANDERSON.

NOTE.—There can be no question the Respondents here are wilfully and deliberately setting the law at defiance. When this petition was presented in April 1865, they were working both seams of coal in both pits, while there was only one shaft to each pit. It is true that in May 1864 they commenced to open a communication between the workings of the lower or main seam in the two pits, but no proper effort was made to complete it within the time allowed by the Act. Though they got possession of the pits in December 1863, they did not commence till May following, and even then only from one end. It was not till May 1865, after this process was instituted, that they commenced to work from both ends. Mr. Alexander, Government Inspector, and the highest authority on the subject, states that if the Respondents had begun on their entry in December 1863, they could easily have completed the communication before the 1st of January 1865. Their late manager, Barrowman, agrees with Mr. Alexander in saying that the work could have been easily accomplished if it had been timeously commenced, and vigorously followed up. The Act was passed in August 1862, long before their entry on the coal works, so that they had ample warning from the first. If, as they say, they found the metals very hard, that only made it the more necessary that they should work from both ends, so as to comply with the Act, but as already noticed this was not done till after these proceedings were commenced even as regards the main seam, therefore, the Sheriff Substitute sees no excuse for the Respondents conduct. It is unnecessary, however, to interdict them from working the main seam, as the communication is *now* completed, so that both ingress and egress can be had from it by two shafts; but the Petitioner was perfectly justified in presenting his petition at the time and in the form he did, and he is therefore entitled to his full expenses.

As regards the *major*, or upper seam, there is no pretence that any attempt has ever been made to comply with the provisions of the Act.

The Respondents try to make it appear that they are only what they call proving the coal in this seam, at all events in the No. 2 pit, and this raises the question as to the precise meaning of the phrase an " existing mine." It is thought the evidence very clearly shows that long before the Respondents entry in December 1863 both pits were in both seams regular going collieries. Mr. Howie, the former owner, states that " both pits were in full operation in August 1862." Mr. Wallace, the trustee appointed under Howie's sequestration, says that both pits were regularly worked during the whole period of his management, and until he delivered them over to the Respondents in December 1863. The 2nd section of the Act 25 & 26 Vict. c. 79 declares the expression " existing mine " " shall " mean a mine that is actually worked at the time of the passing of this Act," and that the expression " new mine " " shall mean a mine opened after the passing of this Act, or an old mine the " working of which is begun afresh after the passing of this Act."

It seems vain in the face of the evidence adduced to attempt to argue, as the Respondents have done, that even in reference to the major seam of No. 2 coal pit they are only proving the minerals, that it is a "new mine," in short, and therefore falls under the exception at the end of the 3rd section of the Act. The Respondents rely on the evidence of their present manager, Munro, who says that not more than eight men on an average are employed in the major seam of No. 2 pit. Simpson, another of their witnesses, says never more than 15 men were employed, and they contend that as the exception in regard to a new mine allows 20 men to be employed, therefore the major seam of No. 2 pit must be considered a new mine. The Sheriff Substitute cannot put such a forced construction on the words of the Act.

The definition of a "new mine" is quite express.

The No. 2 pit has not been opened since August 1862, neither is it an old mine the working of which has been opened afresh since then. But even if effect could be given to this extraordinary reasoning, which the Sheriff Substitute confesses himself unable to do, still the workings of the major seam in the No. 1 pit remain to be provided for. On all hands it is admitted to be an "existing mine."

Even Munro, the Respondents present manager, considers the major seam of No. 1 pit "ordinary "workings," and yet no attempt has ever been made to comply with the provisions of the statute by having at least two separate shafts or outlets by which distinct means of ingress and egress are available to the persons employed therein.

In any view, therefore, the present proceedings are amply justified. It is impossible to over-estimate the importance in a community like this, where so many thousands of the population are constantly employed in the dangerous vocation of mining, and where masters can, unfortunately, be found who esteem their own profits of more value than the lives of their workmen or obedience to law.

In the dreadful accident at the Hartley Collieries, which was the immediate cause of the present Act of Parliament being passed, it is understood there were two outlets to *one* of the seams of coal, (as has now been accomplished here), but the numerous workmen who died such an appalling and lingering death were in another seam to which there was only one outlet, and on it being suddenly and hopelessly closed they all miserably perished.

(Intd.) T. A.

APPENDIX No. II.

SHERIFF COURT, Lanarkshire—Glasgow. (Sheriffs Sir A. Alison and Strathern.)

JOHN GEMMELL, Writer and Procurator Fiscal, Glasgow, v. JAMES PANTON, Coalmaster, Garthamlock House.

October 31, 1865.

Mines Inspection Act, 23 & 24 Vict. c. 151—Penalties—Procurator Fiscal—Title to Sue—Relevancy—Proof, Conjunct and in Replication—*res veniens ad notitiam*—In a prosecution by the Procurator Fiscal of the Sheriff Court against a mine owner, under the Mines Inspection Act, it was objected that the Fiscal had no title to sue—title sustained. In the course of the proof the Prosecutor craved to be allowed a farther proof in replication to the conjunct proof—disallowed by the Sheriff Substitute—but in the circumstances allowed an appeal by the Sheriff—The owner and occupant of a coal mine subjected to a penalty of 10*l.* and 10*s.* a day for a contravention of the Mines Inspection Act.

This was a proceeding under the Mines Inspection Act for the recovery of penalties, the complaint in which set forth that the respondent was, since 20th May 1863 owner of the colliery called Garthamlock Colliery, No. 1 Pit, in the parish of Barony and county of Lanark. That there was an old waste, or place known or likely to contain a dangerous accumulation of waste, in the immediate neighbourhood or vicinity of the workings of said colliery, No. 1 Pit. That by the Fifteenth General Rule enacted by section 10th of the Act passed in the 23rd & 24th year of the reign of Her Majesty Queen Victoria, chapter 151, it is provided that "sufficient boreholes be kept in advance, "and, if necessary, on both sides, to prevent inundations, in every working approaching a place "likely to contain a dangerous accumulation of water." And by section 22nd of the aforesaid Act it is *inter alia* provided: "If any coal mine, colliery, or ironstone mine be worked, and, through "the default of the owner or agent thereof, special rules have not been established for the "same, according to the provisions of this Act, or the general rules or the special rules "for such coal mine, colliery, or ironstone mine, by this Act required to be established have "not been hung up or affixed, or have not after obliteration or destruction been renewed or restored "as required by this Act, or any of such general rules or special rules, provisions of which ought to "be observed by the owner and principal agent or viewer of such coal mine, colliery, or ironstone "mine, and if neglected or wilfully violated by any such owner, agent, or viewer, such person shall "be liable to a penalty not exceeding 20*l.*; and also, in case the default or neglect be not remedied "with all reasonable despatch, after notice in writing thereof given by an inspector to the owner or "agent of such coal mine, colliery, or ironstone mine, to a further penalty of 1*l.* for every day during "which the offence continues after such notice." That on the 20th May 1863 the said colliery, "No. 1 Pit, at Garthamlock aforesaid, was wrought by or on behalf of the respondent; but, in so doing, the respondent then and there neglected or wilfully violated the foresaid Fifteenth General

Rule enacted as aforesaid, by failing to keep in advance on both sides sufficient boreholes to prevent inundations, in every working in said colliery, No. 1 Pit, approaching the foresaid old waste or place known or likely to contain a dangerous accumulation of water; and for said neglect or wilful violation of the foresaid rule, the respondent, as owner foresaid, had rendered himself liable to a penalty not exceeding 20*l.* That on or about the 23rd day of May 1863 notice in writing of the foresaid neglect or wilful violation of the said 15th General Rule was given to the respondent, as owner foresaid, by William Alexander, Government Inspector of Mines, now or lately residing in India Street, Glasgow; but notwithstanding said notice in writing the respondent has failed, up to the date of the present application, to remedy the neglect or wilful violation complained of, and has continued the workings of the foresaid colliery, No. 1 Pit, without complying with the provisions of said 15th General Rule; and the respondent, as owner foresaid, has, by his said failure to remedy the foresaid neglect or wilful violation of said 15th General Rule, subjected himself in a further penalty of 1*l.* for every day during which the said neglect or wilful violation has continued after said notice, viz., from the 24th day of the said month of May last till the 29th day of June, in the year 1863, both days inclusive, and concluded for conviction and penalties.

Appearance was made for the respondent, and defences were stated in a minute. The defences were:—

(1.) Preliminary. No title to sue. (2.) Irrelevancy in want of specification in the averments and conclusions.

(3.) On the merits. An admission that the respondent is the proprietor of and has been working the coals on the lands of Garthamlock, Pit No. 1; *quoad ultra,* a denial of the petitioner's averments so far as these set forth or imply *culpa* on the respondent's part.

The Record was then closed, and after parties' procurators had been heard, the Sheriff Substitute pronounced the following Interlocutor:—

Having heard parties' procurators on closed record finds, that as the statute on which the complainer founds does not indicate at whose instance penalties incurred shall be sued for and recovered, and as the complainer prosecutes in his character of Procurator Fiscal of Court for the public interest, there being no private party prejudiced by the statutory offence, libelled, the complainer is the appropriate party to raise and insist in these proceedings. Therefore repels the preliminary defence of no title to sue: Finds that the complaint sets forth a wilful violation of the Fifteenth General Rule established by the statute 23 & 24 Vict. c. 151, in so far as on 20th May 1863 the defender being the owner, wrought the No. 1 Pit, at his colliery at Garthamlock, without keeping in advance on both sides sufficient bore holes, to prevent inundations in every working in said pit approaching an old waste, or place known or likely to contain a dangerous accumulation of water in the immediate vicinity of said workings; and for which offence it is alleged the defender has incurred a penalty of 20*l.* as prescribed by the 22d section of said Act; and the complaint further sets forth, that on the 23d day of said month, notice in writing of the violation of said general rule was given the defender by Mr. Alexander, the Government Inspector of Mines; but notwithstanding, the defender is charged with having failed, up to the date of the complaint on 29th June last, to remedy the neglect charged, and had continued the workings in said pit without complying with the provisions of said rule, in contravention of said section of said Act, in consequence whereof, and as thereby provided, the defender had incurred a penalty of 1*l.* for every day during which such failure continued after said notice, the period embraced, and from which the penalties extended, being from 24th May till 29th June last, and on proof of said statutory offences the conclusion is that such penalties should be imposed payable to the complainer for behoof of Her Majesty's Exchequer, as directed by the statute. Finds that as so laid the offences charged are sufficiently specific, both in averments and conclusions. Therefore repels the second preliminary defence, and *on the merits* allows the complainer a proof of the offences as set forth in the complaint; allows the defender a conjunct proof, grants diligence at their instance against witnesses and havers, and commissions to any of the Depute Clerks of Court, to take the depositions of havers, receive productions, certify exhibits and to report; and appoints the process to be enrolled first court day, that a diet for said proof proceeding may be fixed.

NOTE.—At the debate, the defender contended that the complainer, in his character of Procurator Fiscal, was an officer of criminal justice, and has no right or title to institute a mere civil suit for the recovery of penalties in respect of offences such as those charged, and it was conceded, indeed the point has been decided, the proceedings to recover penalties, under the statute founded on, are in their nature civil.—Macdonald v. Young, 20th Jan. 1862, 4 Irvine's Justiciary Rep. 154. But that contention, if given effect to, would place a limitation on the duties and functions of the Fiscal which is contradicted by the past practice and nature of his office. In the case of Young, *supra,* the prosecution was at the Fiscal's instance, and although contested in its several points *mordicus,* the title to sue was not disputed. Again, in the earlier cases of Wilson v. Jackson, 19th Jan. 1775, Dic. 16433, and Johnston v. Guthrie & Finlay, 15th May 1810, F.C., which were complaints brought by the Procurator Fiscal to recover the penal sums payable for contravention of the Usury Act of Queen Anne (12 Anne, sess. 2, c. 16, sec. 1), the Court of Session (the procedure being held civil) not only sustained its jurisdiction to review by advocation the decisions given by the Sheriff in the Court of First Instance, and also the Fiscal's title to sue: five other prosecutions of the very same description were decided, as the report bears, in the same way and on the same day as Johnston's case was decided. These are very apt authorities in favour of the complainer's title now in dispute: if a different result had been arrived at, according to Scotch practice, it is doubtful whether the statute libelled would have been operative at all. The Legislature has not delegated the power to prosecute to anyone, and has simply directed the recovery to be "in the manner prescribed by the "law in that behalf;" but it was suggested by the defender that the proper prosecutor would have been the Inspector of Mines appointed to see that the provisions of the statute were complied with; and no doubt mines inspectors might have been suitable prosecutors, but then the Act has anxiously prescribed all their duties, and it has not laid on them the task of enforcing the penalties which might be incurred by parties violating its provisions. Besides, inspectors could not, even if they took action, sue otherwise than as common informers, their office would give them no *locus standi* to prosecute *ad vindictam publicam*, and it has not been shown that either by usage, or by express appointment, have they right to intromit with statutory penalties which are payable to Exchequer. In fact, they could not be regarded in any more favourable light than other ordinary members of the community. Now, it seems inconsistent with the law of Scotland to suffer popular prosecutions for penalties, when the statutes imposing them are silent on the subject, and herein the law of England differs. In England there exist no prosecutors who represent the public, and unless some particular person is indicated by the statute, it is immaterial who lays the information.—Saunders, Prac. of Magistrates' Courts, 2d ed. p. 12. On the other hand, "the denial of a popular action in crime is one " distinguishing excellence which criminal jurisprudence possesses over that of ancient times, when " the right to prosecute given *cuivis e populo* was often exercised as an instrument of oppression, and " produced evils for which various remedies, though ineffectual, such as the oath of calumny, and the " *inscriptio in crimen*, were introduced."—Burnet on Criminal Law, p. 295. Of course an exception was allowed when by the offence committed a private party was injured, and in such cases not only was the person damnified entitled to prosecute for punishment, but also for reparation. The wrong done gave him an interest so much superior to the rest of the public, as to sanction this power of prosecution, and therefore to support a complainer's title in a popular prosecution, he must be able " to " show some substantial and peculiar interest in the issue of the trial—an interest arising out of some " injury which he beyond others has suffered on the occasion libelled, and at which he is entitled to " feel more than the ordinary indignation with which his fellow citizens will regard it. It is not, there- " fore, sufficient that he has some feeble and remote concern in the issue, or one of a general nature in " common with a whole neighbourhood, or with all of the same order or class of society."—2 Hume on Crimes (ed. 1844), p. 118. An Inspector of Mines, consequently, having no personal interest, and having no authority conferred on him, however suitable in other respects, has no peculiar right to prosecute for penalties more than any other citizen; and there being no allegation that as yet anyone has been injured by the acts of contravention libelled, no private party can qualify a sufficient title to insist at his instance. And may the statute therefore be set at defiance? That would be a jubilant result in which all careless mine owners would rejoice—but it cannot be. The public is entitled to have the rules of the statute respected, because they contain measures of general safety and the Procurator Fiscal within his own district represents the public, to the effect of enforcing by penalties the observation of these precautions by those on whom they are laid. Then he has also a right to prosecute peculiar to his office, in respect the penalties, if imposed, have been declared payable to Her Majesty's Treasury; and within his limits the Fiscal is the officer to whom fines so destined must in general be paid. These considerations give the Fiscal that interest, both on behalf of the public and of the Crown, which entitles him to complain. The situation of a complainer having a right to demand statutory penalties has been concisely expressed in these words:—" Unless authority is " expressly given by the Act to a common informer to prosecute, no such person has any title. In " order to sue, a party must either be in the position of a common informer authorized by the statute, " or he must have a common-law title to protect the public interest, or he must have been injured by " the act complained of." See Lord Justice Clerk in Lindsay v. Smith, 9th March, 1859, 21 Sess. Cases, p. 653.

The defender appealed; and after a hearing the Sheriff pronounced the following judgment:—

Having heard parties' procurators under the defender's appeal upon the Interlocutor appealed against, and having made avizandum and considered the closed record, finds the present is a complaint at the instance of the pursuer as Procurator Fiscal of Court, for penalties alleged to have been incurred under the Mines Inspection Act; and the defence now insisted on (the objection to want of title to sue having been departed from) is the second preliminary one of want of due specification: Finds that by the Fifteenth General Rule, under section 10 of the Mines Inspection Act, founded on, it is enacted that in all places where an accumulation of water is apprehended, boreholes shall be opened in advance of the work, to insure its being drained off, and by section 22 the penalty on failure to do so is 20*l.*; and if the Government Inspector has given notice of danger, an additional penalty of 1*l.* a day is imposed till the Act is obtempered: Finds that the petition here asserts that on the 20th of May the defender failed to open the requisite openings in advance, but it does not state that there was then any threatening accumulation of water, farther than that there is an old waste known or likely to contain a dangerous accumulation of water "in the immediate neighbourhood " of the vicinity" of the pit in question: Finds that there is a sufficient specification in the petition both of the statutory offence and of the time and place and circumstances of the alleged deviation from the statute: Therefore repels the objection to the relevancy of the libel, and adheres to the Interlocutor allowing a proof, and dismisses the appeal.

NOTE.—The chief objection urged against the petition is, that there is no specification of the *locus* in which the neglect is said to have been committed, whether in the splint coal mine seam, or the like, or in what part of such mine the neglect has taken place. But to this the answer is, that the *locus* of the alleged neglect is sufficiently given by "the Garthamlock Colliery, No. 1 Pit, in the parish " of Barony," and which is sufficient, just as it is to libel "A house-breaking was committed by break- " ing into or opening a window of a house situated so-and-so," without saying which window, whether on the south-east or west front, or on the ground or drawing-room floor of the house.

The case having gone back to the Sheriff Substitute, the proof allowed was led, and having been concluded, and parties' procurators heard, he pronounced the following Interlocutor on the merits:—

Having heard parties' procurators on the concluded proof and whole cause, and made avizandum: Finds, *in point of fact*, that on 20th May 1863 the defender, James Panton, being the owner of the colliery pit No. 1, at Garthamlock, in the parish of Barony and county of Lanark, wrought the same in wilful violation of the Fifteenth General Rule established by the Act 23 & 24 Vict. c. 151, sec. 10, by failing, excepting as after mentioned, to keep sufficient boreholes in advance and on both sides of every working in the virgin coal seam of said colliery, the same being necessary to prevent inundation, which workings were at said date approaching an old waste likely to contain a dangerous accumulation of water: Finds that the only working in said pit where, at said date, the defender observed or partially observed said general rule, was in an exploring mine then in course of being driven in said virgin coal seam: Finds that, in consequence of such violation of said rule, the defender has incurred a penalty not exceeding 20*l.* imposed by section 21 of said Act: Finds that on the 23rd day of said month of May, William Alexander, Government Inspector of Mines, residing in Glasgow, gave said defender notice in writing of his violation of said rule; but notwithstanding such notice which the defendant received, he failed to remedy the default, and continued the said workings, without complying with the provisions of said rule, from and after the date of said notice and until 29th June following, when the action was instituted—being thirty-five clear days, exclusive of the day of notice and said last-mentioned date—whereby the defender has incurred the further penalty of 1*l.* for each of said days as provided by the 22nd section of said Act: Therefore, finds the defender, James Panton, liable to the pursuer, John Gemmel, as Procurator Fiscal of Court for the public interest, in a penalty of 10*l.* sterling, in respect of the wilful violation of said rule in manner and as before mentioned; and in the further penalty of 1*l.* for each of said thirty-five days, in respect of the defender having failed to remedy the default after notice, *ut supra*—payable said penalties to the pursuer for behoof of Her Majesty's Exchequer, all in terms of the Act libelled, and decerns.

NOTE.—This prosecution has raised questions of considerable nicety, and it is therefore proper to state fully the grounds which, after mature consideration, have constrained the Sheriff Substitute to impose the above statutory penalties.

Preliminary questions were discussed at the debate regarding the interpretation and effect to be given to the words of the general rule libelled, as these words have been made applicable to the established facts of this case. It may be convenient at once to quote the rule as expressed in the statute:—" Sufficient boreholes shall be kept in advance, and, if necessary, on both sides, to prevent " inundations, in any working approaching a place likely to contain a dangerous accumulation of water." And there have occurred the questions—(1) What, within the intendment of this rule, is to be understood by the words " sufficient boreholes?" Do they mean boreholes sufficient in dimension or in number, or in both? (2) When and under what circumstances shall the necessity arise which renders it imperative on the colliery owner to cut boreholes on both sides of every working approaching a place likely to contain a dangerous accumulation of water? (3) What, in the sense of the rule, is a " working?" (4) When may workings be considered approaching a dangerous accumulation of water, so as to require the precaution of introducing boreholes in advance and on the side of the workings? (5) And what shall be esteemed a dangerous accumulation of water? In dealing with these questions, which were all raised and discussed at the debate, it would have been satisfactory had the statute, if possible, given in the interpretation clause a definition of these terms, because, with reference to the meaning of all of them, parties are at issue, and it is perhaps to be regretted that offences against the general rule had not been made subject of arbitration, as has been provided (sec. 17) for other dangerous operations not included in the rules, which might, on inspection, be discovered in any colliery. The duty, therefore, devolves on the Court to give effect to the provisions of the general rules, having regard to the policy of the Act itself, and to the evils which it was devised to repress, and to interpret the terms and words used in their ordinary sense, and applying them to the circumstances of each case as it arises; for it is probable that there were difficulties in framing rules in language so precise as pointedly to meet the exigencies of all acts of contravention. The statute being remedial and corrective, intended to protect the lives of those who toil underground against some of the occasionally recurring dangers of their employment, must be construed literally, so that its purposes may not be frustrated. Keeping these principles in view, the facts as proved may now be briefly summed, so that it may be seen how far the complaint which has been made against the defender is well founded.

The Garthamlock Pit No. 1 had, at 20th June 1863 and previously, been wrought by him; it was sunk 204 feet; there were two coal seams then being wrought, the upper or splint seam at a depth of 105 feet from the surface, and the virgin seam 15 feet lower. Both seams continued to be wrought after 29th June following—the last date libelled. The coal in these seams was wrought "long wall," proceeding northward, and to the rise in the direction of an exhausted coalfield in an adjacent property. In the virgin seam the coal faces in course of execution were 383 feet wide, at intervals along which workmen were employed.

The defender was bound by the statute to have had accurate working plans of his pit, to which the Government Inspector for his district was entitled to access; and the defender had accordingly caused the two plans produced to be prepared, whereon the results of periodical surveys of the operations were laid down, and which had been exhibited to said inspector as in compliance with the statute.

To the north of the defender's coal field, and adjoining it, coal from the same seams which were then working had formerly been wrought by a person named Harvie, who had used the old pit shown on said plans. Harvie had been working to the dip leaving coal pillars, five yards or so apart, to support the roof, so that the defender's operations to the rise, as they advanced, would eventually meet the waste of the old dip workings. Harvie had discontinued his colliery about 15 years before the present complaint was instituted. Two or three hundred yards to the east of Harvie's pit there had existed another colliery in the lands of Cardowan, the coal in which had been wrought level course with it: these collieries communicated and came together at the boundary. The Cardowan works had ceased before Harvie's; and thereafter the water produced by both had necessarily affected Harvie's continuing operations, and he was obliged to pump the water from his pit for several years. But a third colliery, in the lands of Blackfaulds, situated next to but still more to the dip than Harvie's, having in its progress touched his workings, the water naturally passed into that colliery, and thenceforth freed him. The Blackfaulds colliery, however, stopped in its turn 10 or 12 years ago, and the water ceased to be pumped, and in consequence rose therein, so that in a short time it filled it, and then extended to the wastes of the Cardowan and Harvie's collieries (which, as has been seen, communicated); and thus the whole expanse of waste had been standing full of water for several years prior to 20th May 1863. There is no distinct evidence of the area of the waste; but as the three collieries just mentioned had been in operation for a long time, and the coal had apparently been wrought out to their respective marches, it must have been very large, and the bulk of water correspondingly great. The defender, therefore, as he advanced in the direction of the wastes in any of said collieries where they marched with his coalfield, must in reason be held as proceeding towards "a place likely to contain a dangerous accumulation of water." The water was certainly in body so considerable as to be a troublesome neighbour to him, and most perilous to his workmen, from the moment he had cut through or so thinned the intervening coal barrier as to affect it by the bulk and pressure of the water behind. This particular point, it is thought, needs no further comment to justify the conclusion that said waste was likely to contain dangerous accumulation of water. Then, the defender has deponed that he was aware of the existence of the waste. His words are: "There was an old waste ahead of the workings [*i.e.*, his own workings] in both seams between said dates [the dates libelled], and I was working in that direction." So that its existence was not matter of surmise merely or of suspicion, nor a thing probable but only uncertain—the defender here confesses that he knew of it. The Government Inspector, Mr. Alexander, was also aware of the waste; and as early as 28th April 1862 he called the defender's attention to it in the letter No. 6/1, and therein volunteered some suggestions of a precautionary nature to be observed in advancing towards it, but which suggestions the defender does not seem to have adopted. At that time the Inspector had not thought it necessary to refer to the statutory rules; nor did he do so when, on 7th November 1862 (No. 6/2), he again wrote the defender on the subject—although, from a copy of the defender's reply, annexed to that letter, it is obvious he had done so verbally. On 16th February 1863 (No. 6/3), the Inspector took occasion to write the defender further concerning the waste and the colliery operations carrying on towards it. On 24th of that month the Inspector wrote another letter (No. 6/4), showing an uneasy anxiety which he had begun to entertain about the water. Still he does not formally call attention to the statutory rule; but the anxiety becomes more evident, from the fact that three days later he had deemed it right to lay the matter before the Procurators Fiscal of Court, and on the 27th of the same month these officers wrote the defender the letter No. 6/5. And again, on 7th March following, the Inspector, addressing the defender (No. 6/7), more specially adverts to the danger which he apprehended, and seeks to remove an impression which the defender either had or affected to have, that his fears and suggestions amounted to an uncalled-for interference with the defender's operations. This letter contains a retrospect of the Inspector's visits to the colliery, a notice of what he saw, a record of suggestions which he had made, and how far these had been attended to; and then, for the first time, the defender has his attention called in a formal way to the Fifteenth General Rule, with a violation of which he is charged. On the 21st March the Inspector yet again wrote the defender (No. 6/9), acquainting him that the step he had taken of driving an exploring mine ahead of the working faces in the virgin seam, with boreholes therein, did not appear to him (the Inspector) to be a sufficient compliance with the statute; and the defender was warned that "the waste water to which his workings were fast approaching had accumulated for many years: there were at least three exhausted seams from abandoned pits lying full of it; and if he [the defender] should unfortunately touch upon these old workings unexpectedly, there would be such a rush of water as would close his pit before a single individual could be drawn out of it or effect his escape." The Inspector in this letter not only again directed attention to the Fifteenth General Rule, but quoted its very terms, and tendered the defender advice as to precautions which he ought to take. The Inspector made another inspection on 20th May; but as he did not think that what the defender had been doing was sufficient, and in particular as he was of opinion that the defender was not complying with the rule, he wrote the letter of 23rd May, 1863 (No. 6/10), which has been founded on as the statutory notice necessary to be given under section 22 to a party who through default or neglect had violated any of the general rules, involving a continuing penalty of 1*l.* for every day after such notice during which the offence remained unremedied, over and above the penalty for the original violation. The defender replied on 26th May (No. 5/4) that the contents of the inspector's notice would have his most earnest consideration and attention, and that he would do his best to fulfil all the obligations he lay under, by statute or otherwise. Up till 29th June following the defender had taken no other precaution than that which had been previously taken, viz., causing the mine before referred to to be driven ahead of the virgin seam coal faces, and in consequence proceedings were taken against him.

From the letters addressed by the Inspector, and the suggestions which he gave, if the defender was violating the statute, and if he despised the admonitions which had been given, and neglected the precautions suggested to him, then he can only be regarded as a wilful offender. Now this leads to the principal inquiry—whether the defender was on 20th May really violating the general rule founded on; and if so, whether he continued to do so after date of the notice on the 23rd May, and until the complaint was brought on 29th June? The better to judge of this, it will be expedient to recur to the terms of the complaint, which charges an infraction of the rule: (1) "By failing to keep in advance, on both sides, sufficient boreholes to prevent inundation in every working in said colliery,

" No. 1 Pit, approaching the foresaid old waste, a place known or likely to contain a dangerous accu-" mulation of water;" and (2) that after the statutory notice, and until the date of the complaint, the defender had failed "to remedy the neglect or wilful violation complained of." In answer to which charges the defender has contented himself with "a denial of the pursuer's averments so far as these " set forth or imply *culpa* on the defender's part." There would of course be *culpa* if, contrary to the statutory rule, the defender had failed to keep sufficient boreholes *in advance* in every working, and when necessary, sufficient boreholes on *both sides* thereof when approaching a dangerous accumulation of water. The denial of *culpa*, therefore, imports a denial that in any of these respects the defender had failed, if at the dates libelled he was approaching such a place. As has been observed, there was a dangerous accumulation of water in the vicinity of the defender's coalfield, certainly ahead of the pit working, and perhaps on one or both sides thereof; but, at 20th of May, was he, within the meaning of the statute, approaching it so as to render the prescribed precautions imperative? The defender's contention was, that if the pursuer's argument was sound he might perhaps have been complained of on starting his coal seams to the rise, although an acre of solid coal intervened, because he was from the first approaching this waste. But it appears to the Sheriff Substitute that the statute cannot be so interpreted as to give foundation for any proceeding so oppressive. A waste filled with water at so great a distance, or at any very considerable distance, how vast soever its extent, could not be considered dangerous, and therefore the otherwise enjoined precautions would not be obligatory; moreover, operations carried on at such a distance, while they might be regarded as *proceeding in the direction* of the waste, could not be held as yet *approaching* it. The word "approaching" a dangerous waste of water, in the sense of the statute, means, and can only mean, "coming near" the water, so very near as to render it dangerous; and it will always be a question of circumstances when such operations have come so close as to place them in peril. For example: if the seam be thin and of a compact, firm, hard coal, a barrier of that kind might probably be wrought nearer the waste with safety, than if thick, soft, and open; or if the limits and precise proximity of the waste were exactly known, it might be held safe to carry the operations nearer it than if the particulars were uncertain. Or, again, if the waste were comparatively small, the body of water inconsiderable, the operations approaching it wide, and the colliery in which they were conducted capacious, then closer approach might be ventured with more reasonable safety than if the waste were great and the area of the colliery small. Other conditions might be mentioned where danger might or might not be apprehended, or when the colliery operations were approaching a water waste.

In the present case, although the line of waste was shown on the defender's working plans with apparent distinctness, it has nevertheless been proved by his own engineer, Simpson, and by other witnesses, that that line could not be depended on; nay, more, the engineer has deponed that he laid down the bounds of the waste, not from positive survey, but from certain pencil lines which he says he saw on an old surface plan of Garthamlock property, and which was intended to delineate the waste, but which plan is not now extant, at least has not been produced; these pencil lines were attributed to Graham, a tenant of the defender, who had formerly wrought the coal, and with whom a litigation had arisen, in the course of which Simpson says " it was Graham's object to show an " extension of the old waste as far to the south as possible." This witness adds that there was also shown in pencil, on the old plan, a mine driven in Harvey's splint coal workings, which had advanced dipwards considerably beyond his level course workings, and consequently correspondingly near the defender's coal field; that mine, its extent and position, the defender had adopted as a fact, and caused to be laid down on the plan of his own splint coal workings. The mine is there coloured red, and passes in a south-west direction between the farmstead and mansion of Garthamlock. This was one of the plans of his colliery which the defender had exhibited to the Government Inspector when making his inspection, and which, according to the statute (sec. 18), ought to be accurate. But in this action it has suited the defender to cast doubt on the existence of Harvey's mine; and his engineer, Simpson, who made the plans, depones—" The lines indicating the mine in my plan were laid down from said pencil lines on the surface plan. I explain that I did not personally put the lines " on my plan showing said mine, because I did not believe the mine existed; it was done by my " brother in my office, at the defender's request." It will be seen shortly how important to the defender it has become to contradict the existence of this mine; but until proceedings were instituted it does not appear that any dubiety on the subject had been expressed by the defender. A collier named Innes, who wrought in Harvey's pit, was examined, and he said that " there were six or seven " mines in these workings; five were to the south, and two or three were on the north side of the pit-" bottom" (p. 44); but with respect to the mine in the splint coal he said—" that to my knowledge " there never was such a mine in the working" (p. 42). Simpson had not been in Harvey's waste, and his evidence as to its existence or non-existence cannot therefore be much trusted; and Innes' evidence may or may not be correct, but, as far as it goes, it is simply the expression of his belief—a statement that to his knowledge there was no such mine. There is little likelihood, however, that if the existence of that mine had not been credited by the defender, he would not have directed it to be placed on a plan by which his colliery was guided and conducted. Besides, it was laid down there before any cause for these proceedings had happened, and before the defenders expected to be interfered with by the Government Inspector.

All things considered, it must therefore be held, either that the defender's plans are correct, and that Harvey's mine really was where it is there represented to be; or, that the plans uncertainly defined the boundaries of the waste: to one of these alternatives the defender is necessarily shut up. If he was in ignorance of the exact line of the waste, and not sure about the mine, it was his duty to have proceeded with the greatest caution in his operations. And, in that case, every yard he advanced made the waste dangerous, for he could not tell when he might strike it; consequently, and most imperatively, the precautions of the general rule were binding on him. If, on the other hand, his plans formed the test of proximity to the waste, then these would be his guide; and they fall now to be examined with reference to the state of the workings on 20th May.

To begin with the virgin seam. It lay 15 feet beneath the splint coal, in which Harvey's mine is shown. The working face of this seam was at said date 383 feet wide, and was proceeding irregularly—that is, some parts of the face were farther forward than others. The Government Inspector made a survey on 20th May, to determine how near the old waste operations in the seam had reached; and on the following day the defender caused his engineer, Simpson, to make a similar survey for him, and the result of which was put on the plan, and it is satisfactory to find that the inspector and Simpson agree in their measurements. It may be convenient here to mention that for two or three years prior to May 1863, as the defender states (Proof, p. 3), he had been driving an exploring mine in the virgin seam in advance of the working face, the direction of which appears on the plan of that seam. The survey just mentioned determined that on 20th and 21st May that working face, west of the exploring mine, had reached as near as 515 feet to the old waste; at the nearest point of the workings, on the east side of the mine, the distance was 96 feet. The mouth or starting point of the mine was 293 feet from the most distant working on the east, and 90 feet from the farthest on the west, from which it appears that about two-thirds of the coal face was on the east side, in which there were six working places, and about one-third on the west side of the mine, where there were three. At the time of these surveys the mine had advanced 110 feet before the line of face, at about which distance it was kept until after 29th June, the last date libelled.

Again, in the upper or splint seam, Harvey's waste was greatly nearer the defender's coal field than in the virgin seam, the relative position of the waste in each seam being shown on the plan of the latter, the lines being coloured respectively blue and red; but the defender's splint workings were not so far forward as in the virgin seam. Thus, measuring from the virgin coal faces to the line of waste in the seam above, the distance was only 70 feet, and the mine in the virgin seam had actually extended beyond the line of the splint seam old waste 33 feet; it had in fact been wrought so far under the water as at 20th May.

The splint workings themselves, at the furthest advanced point nearest the waste, was 220 feet, so that the coal barrier in that seam was sufficiently great to render the old waste harmless; and the Sheriff Substitute is of opinion that the workings there had not approached it so near at the dates libelled as to render the precaution of the statutory rule necessary.

The exploring mine in the virgin seam was from six to seven feet wide on an average; and the orders given for cutting it were, that it should be kept not less than 96 feet before the face. In advance at the head of the mine there was one borehole an inch and a half in diameter, and which preceded the mine in its progress about nine feet. In addition there were diagonal bores on each side, nine feet in length, and made at intervals of nine or ten feet apart, with vertical bores through the roof, distant from each other about ten yards. So that, if the mine had been the only working in the defender's colliery, he might be held to have more than complied with the statutory rule. There were no boreholes, however, elsewhere in the virgin seam. The mine had been driven, the defender's engineer has deponed, "as in compliance with the 15th general rule," and he saw no occasion for any further precaution.

The distances above given were stated by the witnesses on both sides on the footing that the waste boundary and Harvey's mine were correctly laid down on the defender's plans. And viewing them as correct, it is thereby established that when this complaint was brought, the defender's operations had been carried on in the mine a considerable distance below the splint seam waste, from which it was only separated by the overlying strata of 15 feet, which strata the witnesses say consisted of broken or shattered metals. At this close proximity the presence of water had begun to show itself; for it has been sworn by the defender's manager, Young, that, on the occasion of the inspector's survey, "water was coming from the bores in the coal, and also out of the roof bores there was a good "drop of it. The discharge was such as indicated, in my opinion, that we were near an old waste." The inspector had on this occasion recommended that two additional mines should be commenced on the east side of the existing mine, where the greatest number of working places were situated; but this suggestion the defender declined to follow, and the manager says he had no authority as of himself to make boreholes. The defender's declinature of the inspector's suggestion led to the colliers striking work for two days. As justifying this, the witness Whisker, one of the number, depones that the men spoke of being near the waste, and two of them named Young complained that for every hutch of coal they drew they were getting two hutches of water, and that the coal face was all glistening with water, and red like. It is obvious, then, from the condition of the workings at the date of complaint, and from the 20th May previously, that they had then approached a dangerous accumulation of water, first, because the mine or the virgin seam had already advanced 33 feet below the waste; and, second, because the workings on the east side of the mine were distant from the line of waste only 96 feet, and a continuance of the operations was daily diminishing it. In such circumstances, and with reference to that side, the defender's engineer acknowledged that, if the waste was advanced far enough, the "water might not all have been drawn off by that mine."

The defender argued, however, that even if he had approached a dangerous accumulation of water, he had taken the needful precautions for safety, and had complied with the statutory rule. That meant that he had sufficient boreholes in every working. But he asked what it was that constituted a "working." Of course, if he was ignorant of that, he could scarcely say with confidence that he had complied with the rule. On this point the witness Simpson depones that "every coal seam con-"titutes one working." Fryar states, again: "I consider a working to mean an entire series of faces at which colliers may be engaged in a pit in line, or even if not in line, and proceeding in different "directions, or if one part of the face be in advance of another." And Robertson, another skilled witness for the defence, says: "A coal pit may contain many workings. The coal faces east of the

“ mine I account one working, and the six wall faces to the west of the mine I account a separate “ working. Every part of the pit where the faces are not proceeding in line constitutes a separate “ working, where the operations proceed on the long wall system. Suppose wall faces are proceeding “ in the same direction—if one part should be advanced ten yards ahead of the rest, I would account “ that a separate working from the faces farther back.” There is thus among the defender's witnesses some contrariety of definition as to what constitutes a working. What they say appears to be speculative; for, in their depositions, when not distinctly asked to define workings, they have used the word generally, as indicating places where independent operations were being carried on—points in the coal seams at which different workmen were occupied, and whose advance was various, some being farther on than others. Robertson's opinion accords with the definition given and insisted on by the pursuer, and it is that which is really consonant with a fair interpretation of the statutory rule. The rule does not contemplate driving a mine as the mode by which a dangerous accumulation of water is to be approached, how much soever that mode may be approved by Simpson or by the defender himself; the rule enjoins boreholes as enough; and that is the plan appointed to be followed, whatever additional precautions a colliery owner may take. Now, if, as was the case, the entire coal face of the defender's virgin seam had been wrought, as such faces sometimes are, by the long wall system, some portions being farther forward than others, then in a coal face so wide one borehole could never have been deemed adequate, nor justified the definition that the whole operations in each seam comprised a single working. The statutory rule speaks of sufficient boreholes in every working, implying that there are more than one in a colliery. And the propriety of that reading will readily occur when it is reflected that coal seams are often wrought across, as well as according to their natural inclination; so that if a waste filled with water should happen to lie ahead or on either side, or partly in both positions, one borehole in advance would not cope with the danger—it would be requisite to have a *sufficient* number in advance, and, where necessary, on each side of every working. And the very witnesses who have expressed an opposite opinion have substantially assented to the reading just noticed. Mr. Fryar, for example, speaking of the uncertain position of a waste, says that in such a case he would have deemed it his duty to make explorations at all doubtful places, notwithstanding his previously expressed opinion that the whole coal faces of a seam constituted but one working, and therefore, in compliance with the rule required, the precautions applicable alone to one.

It was a farther contention of the defender's at debate, that not only was his mine, and boreholes in it, an ample precaution, and that he was bound to do no more, but as there happened to be a ridge in the metals intervening between the waste and the workings that would at any rate have dammed back the water even if the waste had been accidentally struck. But that ridge is not shown on the plans, and its extent and position have not been ascertained. Fryar depones that the height of the ridge was “ about 12 feet above the level of the old pit (Harvie's). The coal in the old pit dips to the “ north. The water above the level of the ridge would, when tapped, have run into the mine; but at “ the level of the ridge it would be dammed back. The ridge seemed to run parallel with the face of “ the workings in the mine.” And farther, as the witness adds—“ I saw the ridge before spoken of “ in the mine; it was a swell in the coal over which the mine had been carried—the mine was six or “ eight feet wide. I only saw it there, but could not tell right and left of the mine how far it went.” None of the other witnesses could speak with greater certainty. Since it is confessed, therefore, that although the ridge had proved a perfect barrier as far as it went, yet the water above the ridge must, when tapped, have flowed into the workings, and as the extent of water which would then have entered has not been stated, it may for anything that appears have been abundantly great to have drowned the works as well as the workmen. The existence of the ridge, therefore, even if its position and effect had been better known, does not materially aid the defence.

Moreover, the defender pled that having on 31st March 1864 reached and safely tapped the waste, that the precaution taken by him had been justified as sufficient. The condition of matters, however, when the waste was tapped, is not what can enter into consideration here, but only the state of things on the earlier dates libelled. It appears that after the present proceedings were taken against him, the defender continued to work the coal face of the virgin seam on both sides of the mine; but according to the evidence of the engineer, Simpson, and as is manifest from the surveys laid down on the plans, the defender did not advance with his operations between 4th November 1863 and 9th February 1864, and when the waste was struck his exploring mine had then proceeded as far as 270 feet before the face. The entire cessation of his works, except in the mine, in November 1863, after proceedings had been instituted for the defender's neglect in May 1863, cannot affect the decision. The statutory rules were intended to compel colliery owners to take certain prudent steps for the protection of the lives of their workmen, the necessity for which past experience had at too great sacrifice taught, and notwithstanding which it was expected that the danger they were framed to guard against would not often occur; and the well-known fact that danger has seldom befallen those who have observed the rules, forms a favourable comment on their policy and wisdom. That colliery owner, therefore, who, like the defender, had found his works so situated as to require observance of the rule, and yet wilfully refused, justly incurred the blame, and deserved the punishment appropriately attaching to the offence, although the apprehended peril had been providentially averted. It is not improbable that this prosecution led the defender to cease his operations until his mine had reached the waste; it is clear that at the date of the complaint, and for some months afterwards, he persevered in his objectionable operations without other precautions than the mine. That course may have gratified himself, and even vindicated the efficacy of his mine, but he failed notwithstanding to fulfil the requirements of the law. If the defender were permitted to despise the statutory rules, and to establish others for himself which he or his engineer might deem better, then the rules might as well be cancelled, and the statute laid aside, and permission given to every colliery owner to do, when danger was at hand, that which seemed good in his own eyes, regardless of the lives which his rashness or stubbornness put in jeopardy.

Finally, the defender contended that the Mines Inspector had not given him a proper formal notice that he was contravening the rule, to entitle the pursuer now to claim the penalties exigible from those who had received intimation of default, but neglected to remedy it. The meaning of this objection was, that the inspector's letter of 23rd May 1863 (No. 6, p. 10), made reference to a previous letter which contained details of the default complained of without reiterating them. But, as appears to the Sheriff Substitute, even if the letter was not complete without reference to a previous letter, (as the defender has admitted receipt and produced it), there exists no reason, and, as far as he is aware, no authority for holding that the statutory notice as given is not sufficient. The letter of 23rd May, however, does give a complete statutory notice, independently of the previous notice to which reference had been made. The Act (p. 22), requires that, in case the default or neglect be not remedied with all reasonable despatch after the inspector shall have given notice in writing, then the daily penalties shall be incurred. Now the inspector, in his letter of 23rd May, states: "It does not "appear to me that the 15th general rule of the statute, 23rd & 24th Vict. cap. 151, is at present "observed by you at Garthamlock Colliery;" and it concludes with a suggestion as to the virgin seam which the defender might or might not follow, as he thought fit, but he was not entitled to dispense with the provisions of the 15th rule, which the inspector warns him he was not observing. The language of the rule being statutory, the defender was bound to know, and he did know it; for, although not bound, the inspector, in an earlier letter, had quoted it to him.

The Sheriff Substitute, in conclusion, takes leave to observe that he is sensible, in disposing of this case, of being elaborate, and perhaps tedious, in expressing his views; but as he understands this is the first case which has occurred in this court in which penalties have been claimed for a contravention of the particular rule founded on, he has been anxious both to give the *rationes decideni* at length, and to examine with minuteness the several defences urged, and which were supported at the debate with uncommon ability.

No expenses have been awarded in addition to the penalties, inasmuch as the statute does not make provision for costs; and it appears that, in all such cases, the penalties inflicted cover expenses.

Wilson v. Jackson, 19th January, 1775, Dic. 16433; M'Adam v. Logan, 25th July, 1755, Dic. 8679; Barclay's M'Glashan on Sheriff Courts, p. 343.

The respondent appealed; and after parties' procurators had been heard, the sheriff pronounced the following judgment:—

APPENDIX No. III.

Having heard parties' procurators for the respondent, and also the complainer, at great length under the appeal for the respondent, Interlocutor appealed against, proof adduced, and having made avizandum and advised the whole cause, for reasons stated in the following Note, adheres to the Interlocutor appealed against, in so far as the modified penalty of 10*l.* is found due; but as regards the farther penalty of 1*l.* a day for each of the 35 days found due by the respondent, from his failure to remedy the defect after the notice by the Inspector, modifies the same to 10*s.* for each day, and so far alters the Interlocutor complained of, but *quoad ultra* adheres thereto, and dismisses the appeal, and decerns.

Note.—This is a case of much importance, both to the respondent and all proprietors or lessees of coal pits, as well as the public, and it was very ably argued both by the complainer as the public prosecutor, and also by Mr. Burns on behalf of Mr. Panton the respondent, and as the Sheriff has to a certain extent adhered to the Interlocutor under review, he is desirous of explaining more fully than he could do in the former Interlocutor the grounds of his decision.

The present case is one of a class of cases which is, strictly speaking, neither civil nor criminal, but a sort of hybrid betwixt the two. The original complaint concludes for a penalty of 20*l.*, in terms of the statute, and a further penalty of 1*l.* a day from the 23rd of May to the 26th of June last, inclusive. There is no conclusion for imprisonment, however, in default of payment, and the only composition concluded for to compel payment is for decree, as for an ordinary civil debt. The complaint is therefore half civil and half criminal, and the statute on which it is founded being 23 & 24 Vict. cap. 151, contains no authority for any more stringent mode for recovering any penalty which may be found to have been incurred. This distinction between the present and an ordinary purely criminal case is not a mere technical one, applying only to the form in which the complaint is to be drawn. It goes to the bottom of the case, and in particular determines the mode in which the evidence is to be regarded by the court, or by which the judgment may be reviewed. It was justly contended on behalf of the respondent that every penal statute must be strictly interpreted, and that *in dubio* the case should go in favour of the accused. On the other hand, the complainer contends that the proceeding is *tota materia perspecta,* not so much of a criminal as of a saving or conservative character; that the damages which it is intended to avert are of so serious a nature, and the penalties provided so trifling in comparison, that the case upon the whole savours more of a *civil* than a criminal nature, and that no presumption other than what obtains in civil cases is to be held as attaching to the evidence on either side.

In forming an opinion on these opposite arguments, the Sheriff conceives that the proper course is not to apply to the case the niceties of criminal pleading on the full requirements of law in criminal prosecutions properly so called, but, on the condition always of the main facts of the case being established in evidence, to give the statute a fair and even liberal interpretation. Being intended for the preservation of life and property, and to avert, if possible, calamities often of the most fearful and dreadful description, the court seems to be only following out the obvious intention of the Legislature when they give the statute such an interpretation, reserving always for the respondent, that a penalty, even though only of a pecuniary kind and of small amount, is not to be imposed upon a party except upon sufficient legal evidence that it has been incurred. Proceeding on these principles, the Sheriff has affirmed the finding of the Sheriff Substitute, which repels the objection to the whole proceeding libelled on, that there is no sufficient evidence of the respondent having neglected to comply with injunctions of the statute; and that the allegations of the complainer on this point are sufficient, cannot admit of doubt. The fifteenth general rule of the Act in question directs that "sufficient "boreholes shall be kept in advance, and, if necessary, on both sides, to prevent inundations in every "working approaching a place likely to contain a dangerous accumulation of water." The petition states that "there is an old waste or place known or likely to contain a dangerous accumulation "of water in the immediate neighbourhood or vicinity of the working of the respondent's colliery, "No. 1 Pit." It then alleges that on the 20th May 1863 the said colliery, No. 1 Pit, was wrought by the respondent, but, in doing so, he neglected or wilfully violated the foresaid fifteenth general rule enacted as aforesaid, by failing to keep in advance on both sides sufficient boreholes to prevent inundations in every working in said colliery, No. 1 Pit, approaching the foresaid old waste or place known or likely to contain a dangerous accumulation of water," and that for such neglect the respondent has rendered himself liable in a penalty of 20*l.*

The petition then alleges that "on or about the 23rd May 1863 notice in writing of the neglect "or wilful violation of the fifteenth general rule was given to the respondent by the Government "Inspector of Mines, but that, notwithstanding said notice, he had failed up to the date of the com-"plaint to remedy the neglect," and has continued the working without complying with the provisions of said fifteenth general rule, and has thereby "subjected himself in a further penalty of 1*l.* "for every day during which the said neglect or wilful violation was continued after said notice."

These being the allegations of the complainer, what appears to be incumbent on him to establish his case is to prove three things: 1st, that the respondent was working the pit in question before any notice was given by the Inspector, without observing the enactments of the fifteenth general rule. If this is established, the primary penalty of 20*l.* is incurred, although no notice had been given. But in such a case it is incumbent on the prosecutor to prove that there was a dangerous accumulation of water ahead, and that more boreholes were necessary in every working. 2nd, that specific and direct notice was given by the Government Inspector that the workings were contrary to the statute, and that the Inspector required them to be stopped. 3rd, that, notwithstanding such notice in writing, the workings complained of were continued by the respondent down to the 29th of June, so as to subject him to the further penalty of 1*l.* each day for such neglect after the date of the notice.

What is directed in the Fifteenth General Rule of the statute is "that sufficient boreholes shall be "kept in advance, and, *if necessary, on both sides,* to prevent inundations in every working approach-"ing a place likely to contain a dangerous accumulation of water." Much argument was advanced at the debate, on the question what was meant by the words "in every working." It is admitted and sufficiently proved that the workings here were not on the stoop and room system, but by what is called "long wall;" that is to say, the colliers work abreast and cut away the entire coal in front of them, supporting the roof as they advance by artificial pillars or props of the useless minerals which they had cut out. In these circumstances it does not very clearly appear whether the words "in "every working" mean in every working *of each individual collier,* or *the entire front or place worked at* by the colliers *as a body.* But adverting to the use of a similar expression in the First General Rule, and considering also the reason of the thing, which does not seem to require that every collier at each side of his little compartment should push forward a borehole for the protection of himself and his comrades, it appears to the Sheriff that the most reasonable interpretation to put on these words is, that they mean every working having one face, though of several colliers working together.

If this, therefore, be the true meaning of the words, the coal owner's duty would be either to have boreholes ahead of each working, or to have one on each side of the general working; and if the latter were done it would appear to be a sufficient compliance with the rule of the statute to relieve the owner or lessee of the pit from the penalty.

In considering how far the evidence supports the statement in the petition as to the alleged infringement of the Fifteenth General Rule by the respondent, the more advisable course appears to be, to consider first the points about which there is no dispute, and which are quite clear on the proof, and then to come to those matters on which the evidence is contradictory, or are in themselves more open to difference of opinion.

1. It seems perfectly clear that there was a dangerous accumulation of water ahead of the workings in the direction in which they were working. It appears, from the evidence of Mr. Alexander, the Inspector, that the front where the colliers were cutting away the coal was at the distance of 515 feet from an old waste, being at the rise of great extent, and lying at right angles to the line of the workings. That this large waste contained water is proved, not only by the appearance of water percolating and shivering through the coal as the men approached it, but by the still more decisive fact that one of the respondent's workmen actually *reached the waste,* tapped it, and let out some water, which he afterwards stopped by plugging up the hole. So numerous, indeed, were the indications of water ahead, that the colliers in a body struck work for two days from apprehension of danger from the water, and from there being no boreholes at that time except the one to be hereafter mentioned. It is true there was a ridge in the water waste near to the point of the working; but although that might diminish the quantity of water that would flow over, which was of unknown magnitude, it could not altogether prevent it.

2. The only precaution which the respondent had taken up to February last against the danger of this inundation, was to run a borehole from the western extremity of the front where the workings

were going on ahead towards the waste, in order to give notice of approaching danger. This borehole appears to have been very well made, with lateral boreholes on each side, like feeders springing out into the rock, and a vertical bore to connect it with the splint coal in that seam. This borehole had been projected to within 250 feet of the waste, and has, since this action was raised, been projected into it. But there was no bore at the *eastern* end of the working, nor any intermediate bores at the colliers separate workings; so that with the exception of the bore made at the west end, there was nothing done to intimate the proximity of danger along the whole front on which the workings were going on, which would appear from the plan to have been from 400 to 500 feet broad.

3. In the circumstances, the Government Inspector appeared to have become seriously alarmed for the danger that the colliers would run if without an additional bore or bores the workings were continued to be run near the front of the old waste. He expressed his apprehensions accordingly, both verbally and in writing, to the respondent, and the two letters of date 7th and 21st March 1863 expressed the Inspector's views on that important subject. The respondent admits the receipt of these letters, and they speak for themselves. The import of them appears to be that the Inspector was very apprehensive of danger from the proximity of water in the waste, and that it was indispensable either that the boreholes should be projected in front of each collier's working, or that at least an additional borehole should be made on the east side of the entire workings. These letters are of importance as throwing light on the previous views of the parties, and the real grounds of apprehension of danger which the Inspector entertained; but neither of them are the formal notice required by the statute to be given by the Inspector, which was not sent till the 23rd of May following, and to the proceedings following, on which it will hereafter be necessary to advert.

The most important of these letters anterior to the formal notice of 23rd May is the Inspector's letter of 7th March 1863 in which he says:—“ On the 23rd of February last, when I visited your
“ pit, I found that a mine was being driven in advance of a portion of the virgin coal faces, 54 feet
“ or thereby, and on the roof of that mine there had been a borehole made vertically, and said to be
“ to the splint coal, lying from 12 to 15 feet above it. *This solitary bore was all the precautionary*
“ *measures you had adopted in the virgin coal,* with the view of tapping the large body of ‘waste’ water
“ which surrounded your colliery. There were *no boreholes being made in the coal mine* as alleged, either
“ in advance or alongside. I learnt that the men had *struck work,* previous to my examination,
“ because there were no boreholes kept in advance in the coal mine, and that you had decidedly
“ refused to allow such boreholes to be made. When I saw you at 85, Buchanan Street, with the
“ plans, on the following day, 24th February last, you agreed to adopt all the precautions I then
“ suggested, and a note of them was entered by yourself in your note-book. If you compare them,
“ you will find they are substantially the same as those contained in my letter of that date.” Again, in his letter of 21st March 1863, the Inspector writes: “ Assuming the uncertainty of the
“ position of the old waste marked on plan, it does not appear to me *that a single exploring mine, such*
“ *as you are driving, is a proper compliance with the* 15*th General Rule of the statute* 23 *&* 24 *Vict. cap.*
“ 15. The waste water to which your workings are fast approaching has accumulated for many
“ years; there are at least three exhausted seams from abandoned pits lying full of it, and if you
“ should unfortunately touch upon these old workings unexpectedly, there would be such a rush of
“ water as would close your pit before a single individual could be drawn out of it or effect his
“ escape.” It was explained to me that the levels approaching the mansion-house had been stopped. If the walls to the east of the exploring mine, and lying between it and the mansion-house, are not to be abandoned also, *I have again to direct your attention to the* 15*th General Rule of the statute,* and I would suggest in the meantime, though it may not be necessary to keep boreholes in advance at *every working place, another exploring mine be started, commencing at the sixth wall to the east of the present exploring mine, and marked E on plan,* and to be kept in advance of the workings at least 12 fathoms; and in driving this coal mine I would advise that a bore be kept going right ahead of it, never less than 12 feet in advance, and that angular or wing bores, not less than 10 feet in length, and not more than 9 feet apart, should also be driven on each side of it. The Inspector, in his letter of 23rd May 1863, says:—“ It does not appear to me that the 15th General Rule of the Act is at present observed by
“ you at Garthamlock Colliery. I have again to solicit your attention to my letter of the 21st March
“ last—virgin coal. The working places places in this seam to the west of the exploring mine, which
“ have been abandoned for a considerable time in consequence of waste water, are now being
“ resumed. I am of opinion that if those places are to be extended, that a third exploring mine,
“ perhaps 50 yards to the west of the present exploring mine, is indispensable, and the precautionary
“ measures suggested in the present exploring mine should be carefully observed in it.”

It is perfectly clear from this correspondence that the respondent was distinctly warned by the Inspector for months before the formal notice was sent to him of 23rd May, that the mode in which he was working the virgin seam coal in question was dangerous and in violation of the statute. And although the Inspector drew the respondent's attention to the fifteenth general rule, which required a borehole to be projected in front of every working, and, if necessary, one on each side, yet the latter did nothing to guard against danger, and contented himself with the single exploring mine he had run forward from the western end of the workings in question, leaving the whole workings to the eastward, five in number, and extending over a front of 293 feet in breadth, *wholly unprotected either by exploring mines, lateral bores, or anything whatever.* These were the statements of the Inspector contained in his various letters, written in his official capacity, to the respondent. It is perfectly true, as the respondent's agent contends, that even in a *quasi* criminal case the statements of parties in letters are not to be taken as evidence. But though not evidence *per se* of the facts they narrate, they are the best possible evidence of *the facts having been narrated,* and as the receipt of the letters containing the allegations is admitted, they prove that the facts alleged were officially brought under the respondent's notice. This notice, then, being established, it remains only to inquire whether there was a probable dangerous accumulation of water ahead of the respondent's workings, and whether, if such was the case, he is proved to have done anything to guard against danger thence arising.

Upon the first point the circumstances have been already noticed, which sufficiently establish the Inspector's allegations. It is proved that right ahead of the workings, and in the direction which they were taking, there was a vacant space occasioned by no less than three wastes bearing different names, and which were within about 500 feet off the respondent's workings. Probably no one ever heard of a waste of such size existing in a humid climate without having come to be filled with water. But the matter is now put beyond a doubt, for the respondent has pushed forward his exploring mine to the west of the workings in question, and has *actually tapped the water, which was only kept out by plugging up the hole.* That there was an accumulation of water, therefore, in the waste ahead is quite certain; and that accumulation of water in a waste of such extent, and of such age, was likely to be dangerous, is just as certain.

This, then, being the state of the danger, and the warning which the respondent had received regarding it being proved, it remains to inquire what he has done, or if he had done anything to avert the danger. All the witnesses prove that *nothing whatever was done, either in the shape of running forward an additional* exploring mine at the east end of the face, or making boreholes along the front of the workings, which were left wholly unprotected save by the one exploring mine at the western end; not only this, but the workings continued at the east end, down to the date of serving the present complaint, on 29th June, and even, if the two witnesses are to be believed, for some weeks after. It is true that these workings are said by the witnesses to have been of small extent, and carried on by only two or three colliers. It is not the extent of front over which the workings are carried which constitutes the danger. Everybody knows the consequence of letting out an accumulation of water. A rat's hole in some of the canals in Holland has more than once occasioned a rush of water into the adjacent territory which has submerged a province. It is true that there was, to all appearance, a considerable barrier of coal between the old waste and the workings, which may have been from 400 to 500 feet wide, but no one can say what the breadth actually was, because the plan founded on was not made from actual survey, but the hearsay of old colliers, and it is only necessary to look at the imaginary straight line drawn from the front of the waste to be convinced that it differs widely from the real state of the fact. No one ever saw a coal waste scooped out with a straight front of such dimensions. It is only necessary to compare that imaginary front of the waste with the real front of the respondent's workings, to see how widely the imagination of the draughtsman has departed from the probable realities of the case; and that the working of which the petitioner complains was approaching the old waste in a dangerous manner is proved by the facts already mentioned, that the water was seen percolating through the seam at the head workings, and that the colliers in consequence struck work from sense of impending danger.

If these observations be well founded, they remove all importance from the question, whether the working contemplated in the Fifteenth General Rule of the Act is the working place of each separate collier, or the aggregate of several colliers' places working with one front. In either case the respondent has neglected the Act of Parliament. If the word "working" mean the general front, the respondent, in the circumstances of danger which here existed, was bound to have adopted the Inspector's suggestion, and to have had an exploring mine and boreholes on each side of the workings. If the "working," again, means each individual collier's chamber, then the Act of Parliament has been equally violated, because there were no boreholes on each side of the working, as it enjoins.

The liability of the respondent for the prolonged penalty of 1*l.* each day that the workings were continued *after* the notice by the Inspector, as established by the evidence of the colliers already noticed, which proves that down to the date of service of the present complaint the respondent went on working at the eastern end of the face, without either boreholes or a mine in advance, in direct opposition both to the injunction of the Act of Parliament and the Inspector's notice and suggestions; but as these workings were of small extent, and were apparently intended to bring up the eastern end of the level of the whole front, and not to push them beyond it, the Sheriff thinks it not unreasonable to modify the penalty for each of these additional days to 10*s.* instead of 1*l.*, as awarded by the Sheriff Substitute.

Act. JOHN GEMMELL. Alt. WILLIAM BURNS.

SCHEDULE No.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS OF LIFE arising therefrom, in the WESTERN DISTRICT of SCOTLAND, during the Year ended 31st December 1865.

Date.	No. of Accident.	Name of Colliery.	Where situate.	Owners' Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total.
1865. Jan. 30	1	Newton - -	Cambusiang -	J. P. Kidston - -	Robert Clark -	Assistant -	25	By the crane rope slipping round the barrel while being lowered in the shaft.	–	–	1	–	–	1
,, 31	2	Warrickhill -	Kilmarnock -	Merry and Cunningham -	Daniel Raffarty -	Collier -	53	By falling amongst a train of loaded hutches, upon a horse road, when riding upon them, contrary to the colliery rules.	–	–	–	1	–	1
Feb. 2	3	Garthamloch -	Ballieston -	James Panton - -	John Letham -	Ditto -	16	Fall of roof - - - - -	–	1	–	–	–	1
,, 16	4	Barleith, No. 5 pit	Hurlford -	John Galloway and Co. -	Robert Raeside -	Ditto -	41	Fall of stones - - - - -	–	1	–	–	–	1
,, 23	5	Maidenbank -	Muirkirk -	Eglinton Iron Company -	James Derroch -	Pony driver	16	Fell off a race of loaded hutches, and was run over by them.	–	–	–	1	–	1
,, 27	6	Hurlford, No. 15 -	Hurlford -	Allan Gilmour and Co. -	Hugh Kears -	Collier -	30	Fall of coal - - - - - -	–	1	–	–	–	1
Mar. 4	7	Cambuslang -	Cambuslang -	Archibald Russell - -	William Gibb -	Drawer -	19	Was run over by his hutch upon a "rise" road.	–	–	–	1	–	1
,, 18	8	Stonelaw - -	Rutherglen -	J. R. Reid - - - -	John Cardow -	Redsman -	32	Fall of roof - - - - - -	–	1	–	–	–	1
,, 20	9	Bantone - -	Kilsyth -	James McGregor - -	Matthew Chapman	Collier -	28	Ditto - - - - - -	–	1	–	–	–	1
April 1	10	Drumpeller -	Coatbridge -	Trustees of the late John Wilson.	Patrick McCarnie -	Ditto -	23	Ditto - - - - - -	–	1	–	–	–	1
,, 18	11	Espieside, No. 3	Ditto -	William Baird and Co. -	Joseph Eaglesham	Ditto -	43	Explosion of fire-damp - - -	1	–	–	–	–	1
,, 18	12	Raw - - -	Ditto -	Ditto - - - -	James Reid -	Fireman -	35	Ditto - - - - - -	1	–	–	–	–	1
,, 20	13	Greenfield - -	Shettlestone -	G. B. McNair and Co. -	Alexander Gowans	Drawer -	13	Crushed between hutch and the roof of the mine.	–	–	–	1	–	1
,, 25	14	Annbank, No. 4 -	Ayr - -	T. T. Gordon - - -	Alexander O'Hara	Ditto -	13	Fall of roof - - - - - -	–	1	–	–	–	1
May 4	15	Maidenbank -	Muirkirk -	Eglinton Iron Company -	John Bell - -	Collier -	45	Fall of coal - - - - - -	–	1	–	–	–	1
,, 9	16	Garscube - -	Maryhill -	James Barclay - -	John Craig - -	Ditto -	60	Fall of roof - - - - - -	–	1	–	–	–	1
,, 13	17	Annbank, No. 4 -	Ayr - -	T. T. Gordon - - -	James Reid -	Labourer -	23	By one of the guide rods being driven out of the shaft and falling upon him.	–	–	–	–	1	1
,, 29	18	O encast - -	Coatbridge -	William Baird and Co. -	John Johnstone -	Collier -	36	Fall of roof - - - - -	–	1	–	–	–	1
June 6	19	Solsgirth -	Kirkintilloch -	James Gairdner - -	William McLachlan	Oversman -	50	Fell from the cage while being drawn up the shaft.	–	–	1	–	–	1
,, ,,		Ditto - -	Ditto -	Ditto - - -	Oliver Love - -	Collier -	35	Ditto - - - - - -	–	–	1	–	–	1

SCHEDULE I.—List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accident.	Name of Colliery.	Where situate.	Owners' Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total.
1865. June 6	20	Annbank, No. 4	Ayr	T. T. Gordon	Archibald Malonay	Pony driver	16	Fall of roof	—	1	—	—	—	1
,, 17	21	Hillhead	Kilmarnock	John Gilmour and Co.	Andrew Robertson,	Boy	12	By attempting to step on to the cage at the pit mouth, when in motion, and fell down the shaft.	—	—	1	—	—	1
July 5	22	Annbank, No. 4	Ayr	T. T. Gordon	Arthur Murphy	Pitheadman	35	Was struck by the bell crank of the pumping machinery.	—	—	—	—	1	1
,, 14	23	Coney Park	Denny	John Barr	George Watson	- - -	16	Fall of coal	—	1	—	—	—	1
,, 23	24	Portland	Hurlford	Eglinton Iron Company	Mark Greir	Pitheadman	60	Was crushed at the screen between two waggons.	—	—	—	—	1	1
Aug. 9	25	Holmes	Kilmarnock	Robert Brown	James Campbell	Collier	23	Fall of roof	—	1	—	—	—	1
,, 12	26	Holmes	Galston	John Horne	Matthew Borland	Drawer	15	Ditto	—	1	—	—	—	1
,, 22	27	Palacecraig	Airdrie	William Baird and Co.	John Hamilton	Collier	35	Ditto	—	1	—	—	—	1
,, 28	28	Lucknow	Stevenston	Merry and Cunningham	William Kilpatrick	Assistant Fireman.	36	Explosion of fire-damp	1	—	—	—	—	1
,, 30	29	Kirkwood	Coatbridge	John Hendrie	Charles Dawson	Collier	30	Ditto	1	—	—	—	—	1
Sept. 7	30	Trodigal	Campbelton	John Smellie and Son	Andrew Ballantyne	Engineman	25	Came in contact with the pumping crank while in motion.	—	—	—	—	1	1
,, 22	31	Gartshore, No. 7	Kilsyth	William Baird and Co.	John Fingland	Collier	30	Explosion of firedamp	1	—	—	—	—	1
,, ,,	,,	Ditto	Ditto	Ditto	John Brown	Boy	14	Ditto	1	—	—	—	—	1
,, 23	32	Balgray	Maryhill	Montgomery and Fleming	John Fleming	Engineman	40	Fell down from the shaft from the pithead framing.	—	—	—	—	1	1
,, 29	33	Boyleshole	Tollcross	Colin Dunlop and Co.	John Kerr	Collier	56	Fall of coal	—	1	—	—	—	1
Oct. 21	34	Corkerhill	Pollockshaws	Sir John Maxwell	John Barbour	Pony driver	16	Fall of roof	—	1	—	—	—	1
,, 23	35	Eastfield	Rutherglen	T. G. Buchanan	William Jones	Boy	15	Fall of stones from the side of a mine.	—	1	—	—	—	1
Nov. 1	36	Todd's pit	Calder	W. S. Dixon	David Hamilton	Collier	23	Fall of coal	—	1	—	—	—	1
,, 3	37	Netherhouse	Baillieston	John Young	Barney Riggins	Bottomer	45	By falling down the shaft from the main to the splint coal.	—	—	1	—	—	1
,, 4	38	Govan	Glasgow	W. S. Dixon	John Biggins	Collier	40	Fall of roof	—	1	—	—	—	1
,, 6	39	Drumpeller	Coatbridge	Trustees of the late John Wilson.	George Hyslop	Ditto	35	Ditto	—	1	—	—	—	1
,, 15	40	Opencast	Ditto	William Baird and Co.	Wm. Watherspoon	Ditto	45	Fall of coal	—	1	—	—	—	1

SCHEDULE I.—List of Fatal Colliery Accidents—*continued*.

Date.	No. of Accident.	Name of Colliery.	Where situate.	Owners' Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total.
1865. Nov. 16	41	Chalmerston Mine	Dalmellington	Dalmellington Iron Co. -	John Barclay -	Collier -	30	Fall of roof - - - - -	–	1	–	–	–	1
,, 17	42	Canobie - -	Canobie -	Duke of Buccleuch -	John Armstrong -	Roadsman -	46	Ditto while taking out wood - -	–	1	–	–	–	1
,, 27	43	Armshergh -	Irvine - -	Merry and Cunningham -	Charles Ferrie -	Fireman -	59	Explosion of fire-damp - - -	1	–	–	–	–	1
,,	,,	Ditto - -	Ditto - -	Ditto - - -	Charles Yuile -	Brusher -	45	Ditto - - - - -	1	–	–	–	–	1
,, 28	44	Drum Park -	Baillieston -	James McKenzie - -	John Summerville	Assistant Engineman.	19	By falling from a platform in the shaft while assisting to change a "clack."	–	–	1	–	–	1
,, 29	45	Holmes - -	Galston -	John Horn - - -	James Angus -	Roadsman -	61	Fall of roof - - - -	–	1	–	–	–	1
,, ,,	,,	Ditto - -	Ditto - -	Ditto - - -	John McMahon -	Ditto -	40	Ditto - - - - -	–	1	–	–	–	1
Dec. 14	46	Pian - - -	Kilmarnock -	John McKnight and Co. -	William Stewart -	Collier -	22	Fall of coal - - - - -	–	1	–	–	–	1
,, ,,	47	Cambuslang -	Cambuslang -	Archibald Russell - -	Thomas Wilson -	Roadsman -	36	Fall of roof - - - - -	–	1	–	–	–	1
,, 25	48	Portland - -	Hurlford -	Eglinton Iron Co. - -	Richard Watson -	Engineman	25	By the bursting of a boiler - -	–	–	–	–	1	1
,, 27	49	Broomhill Mine -	Denny - -	William Baird and Co. -	James Thomson -	Roadsman -	24	Explosion of fire-damp - - -	1	–	–	–	–	1
,, 29	50	Barleith, No. 5 -	Hurlford -	John Galloway and Co. -	John Strathdee -	Drawer -	16	Was run over by a hutch upon a "rise" road.	–	–	–	1	–	1
									9	28	6	5	6	54

SCHEDULE No. II.

LIST of the FATAL ACCIDENTS in IRONSTONE MINES, and LOSS OF LIFE arising therefrom, in the WESTERN DISTRICT of SCOTLAND, during the Year ended 31st December 1865.

Date.	No. of Accident.	Name of Mine.	Where situate.	Owners' Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Ironstone and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total.
1865.														
Feb. 13	1	Bradley	Dalry	Merry and Cunningham	Stewart Boyd	Miner	24	Explosion of fire-damp	1	–	–	–	–	1
April 1	2	Glenlogan	Cumnock	Eglinton Iron Co.	William Brown	Ditto	16	Fall of roof right along the face of the wall.	–	1	–	–	–	1
„	„	Ditto	Ditto	Ditto	Edward Pillen	Ditto	16	Ditto ditto	–	1	–	–	–	1
„	„	Ditto	Ditto	Ditto	William Wallace	Ditto	16	Ditto ditto	–	1	–	–	–	1
„ 16	3	Rodinghead	Ditto	Ditto	James Tosh	Bottomer	30	By the cage getting out of the guide rods while ascending.	–	–	1	–	–	1
„	„	Ditto	Ditto	Ditto	Peter Folley	Miner	22	Ditto ditto	–	–	1	–	–	1
	„	Ditto	Ditto	Ditto	William Kerrichan	Ditto	18	Ditto ditto	–	–	1	–	–	1
May 2	4	Inkerman	Johnstone	Merry and Cunningham	William Gebbie	Ditto	48	Explosion of gunpowder while "stemming" a shot.	–	–	–	1	–	1
	„	Ditto	Ditto	Ditto	Daniel Dillon	Ditto	33	Ditto ditto	–	–	–	1	–	1
„ 8	5	Drumgrange	Dalmellington	Dalmellington Iron Co.	George McMath	Ditto	40	Got crushed by a piece of ironstone against a "tree" or support.	–	1	–	–	–	1
July 4	6	Currymire	Kilsyth	W. Baird and Co.	Daniel Berrie	Ditto	26	Suffocated by going into an abandoned working.	–	–	–	1	–	1
Dec. 2	7	Ponessan	Dalmellington	Dalmellington Iron Co.	James Kean	Sinker	20	Fell accidentally into the shaft	–	–	1	–	–	1
„ 18	8	Twechar	Kilsyth	W. Baird and Co.	Robert Ralston	Assistant Pitheadman.	19	Pushed a hutch into the open shaft and fell down with it.	–	–	1	–	–	1
„ 20	9	Kenmure	Bishopbriggs	Wilsons and Co.	Thomas Hamilton	Drawer	21	Explosion of fire-damp	1	–	–	–	–	1
									2	4	5	3	–	14

Mr. Morton's Report.

Report of the Working of the Act for the Regulation and Inspection of Mines (23 & 24 Vict. c. 151.), in Yorkshire, for the Year ended 31st December 1865.—By Charles Morton, Esq.

Sir, St. John's, Wakefield, March, 1866.

As Inspector of Coal Mines and Ironstone Mines for the Yorkshire district, I have now the honour to forward to you my Annual Report.

During the year 1865 there were 47 separate fatal accidents, as compared with 53 in the preceding twelve months.

In the year 1865 the number of persons killed by these deplorable occurrences was 56, as compared with 57 in the previous year.

It is therefore consolatory to perceive that neither the separate fatal accidents nor the human lives lost thereby were so numerous last year as they were in the year 1864, though more men and boys were employed.

The subjoined figures correctly represent for a period of several years the number of fatal misfortunes, and the number of deaths occasioned thereby, at the various collieries and ironstone mines and new sinking pits of my district:—

—	Number of separate fatal accidents.				Number of lives lost.			
	Year.				Year.			
	1862.	1863.	1864.	1865.	1862.	1863.	1864.	1865.
In coal mines - - - - -	39	42	47	44	104	48	50	51
In ironstone mines - - - -	7	5	2	1	7	5	2	1
In new sinking pits - - - -	4	1	4	2	4	2	5	4
Totals - - -	50	48	53	47	115	55	57	56

Notwithstanding the extraordinary development of the coal and iron trades in the West Riding during the last 14 or 15 years, the rapid growth of the mining population, the greatly increased number of collieries, and the more abundant extraction of minerals, it is still highly satisfactory to discover that there has been no corresponding augmentation of mining mortality. On the contrary, there has been a marked and gratifying diminution in the waste of human life at the collieries of this extensive district.

On referring to my former Reports, I find that the aggregate number of deaths in the Yorkshire coal mines during the first seven years of Government Inspection, was 645; but during the last seven years, the total number of deaths has been reduced to 421.

Prefixed to this Report is an important "Return" for the year 1865, showing in each of the 12 inspection districts of Great Britain, the number of collieries worked, the number of male coal miners employed, the number of fatal accidents and lives lost, the quantity of coal raised, and the ratio of accidents and deaths to the tonnage of coal and the persons employed.

From this comprehensive "Return" I beg leave to abstract the following interesting particulars and results:—

Total number of working collieries in Great Britain - -			3,215
Average	ditto	for each inspection district -	268
Actual	ditto	in Yorkshire - - -	422
Total number of coal miners employed in Great Britain -			315,451
Average	ditto	for each inspection district -	26,288
Actual	ditto	in Yorkshire - - -	35,000
Total tonnage of coal raised in Great Britain - - -			98,911,169
Average	ditto	for each inspection district -	8,242,597
Actual	ditto	in Yorkshire - - -	9,300,000

—	Number of separate fatal Accidents.	Number of Lives lost by the Accidents.	Persons employed per separate fatal Accident.	Persons employed per Life lost.	Tons of Coal raised per separate fatal Accident.	Tons of Coal raised per Life lost.
In the collieries of Great Britain - -	837	984	377	321	118,173	100,519
In the Yorkshire collieries - - - -	46	55	760	636	202,174	169,091

This concise and suggestive "Return" also shows for the second time, that whilst the West Riding coal field possesses the largest force of colliers, it exhibits the smallest proportion of deaths, relatively to the vast body of workmen engaged in mining operations.

The before-mentioned "Return" is also accompanied by the usual annual "Summaries" of the separate fatal accidents and lives lost in and about the coal mines and inspected ironstone mines of Great Britain.

In the commencement of my present Report I informed you that 56 unfortunate persons sustained mortal injury, during the year 1865, at the collieries and ironstone pits and new sinking shafts of my own district. I now append a statement as to the chief causes of this lamentable mortality; and with a view to further elucidation, I add similar details for several antecedent years:—

Causes of Death.	Number of separate fatal Accidents.				Number of Deaths.			
	Year.				Year.			
	1862.	1863.	1864.	1865.	1862.	1863.	1864.	1865.
Explosion of and suffocation by gases - -	7	1	4	8	71	1	6	15
Explosion of gunpowder - - -	—	—	1	1	—	—	1	1
Tumbling down shafts - - - -	8	3	6	8	8	8	6	10
Struck by falling substances in shafts - -	1	5	4	1	1	6	4	1
Crushed in or at the bottom of shafts - -	3	1	3	1	3	1	3	1
Roof falling in the mines - - -	17	19	18	11	18	19	18	11
Coal or other mineral falling in the mines -	7	11	11	12	7	11	11	12
Run over or crushed by corves in the mines -	4	3	2	4	4	3	2	4
Water bursting into the mines - - -	—	—	—	—	—	—	—	—
Ropes and chains breaking - - -	—	3	2	1	—	4	2	1
Overwinding - - - - -	—	—	—	—	—	—	—	—
Machinery - - - - - -	1	1	1	—	1	1	1	—
Steam boilers bursting - - - -	—	—	1	—	—	—	3	—
Incidental causes - - - -	2	1	—	—	2	1	—	—
Totals - -	50	48	53	47	115	55	57	56

It is again my agreeable duty to acquaint you that the Yorkshire mines have not, during the past year, been visited by any very terrible and devastating explosion of gas, or by any other awfully destructive calamity; the most serious disaster having been accompanied and followed by not more than three deaths, whilst 42 out of the whole 47 mortal occurrences were attended by a single death in each case.

At the end of this Report I have annexed the usual Tabular List of fatal mining accidents in the West Riding coal field, for the year 1865; and I now respectfully invite attention to a short narrative of facts and circumstances appertaining to several of the more prominent casualties in that melancholy list.

Early in January, Thomas Dibb, an experienced carpenter at Messrs. Briggs and Co.'s Whitwood Colliery near Normanton, boldly ventured to go up the pit with an untied bundle of wooden boards in his arms, and carelessly standing on the top of the cage-cover. The result of this hazardous attempt was, that the ascending load of loose boards got entangled with some part of the shaft-framing, and suddenly hurled poor Dibb from the roof of the cage to the bottom of the pit, where he expired. James Kearfoot and John Macauley, who were the "hangers-on" at this shaft, ought (according to the Special Rules) to have restrained the luckless carpenter from his rash experiment; and they were fined 30*s*. for having neglected to do so.

About the middle of January, Nathan Firth, a coal hewer, and Henry Spurr, a trammer, were burnt to death by fire-damp at Messrs. Charlesworth's Milnthorp Colliery near Wakefield. These unfortunate persons happened to cut through into some old works containing inflammable gas; and as they used locked safety lamps, they might have been kept harmless; but shortly afterwards another miner, George Booth, heedlessly approached them with a naked light, which soon kindled the fire-damp. Firth and Spurr were then quickly enveloped in a blaze, whilst the imprudent man who thoughtlessly did the mischief, escaped uninjured. This grievous explosion furnishes ample proof, if any were previously wanting, of the imminent risk incurred by permitting candles and safety lamps to be in such close proximity.

Later in January, an engineman named William Hebblethwaite, and a couple of miners, Thomas Walton and William English, were killed under conditions of an uncommon character at Messrs. Haynes and Co.'s Hall Royd Colliery near Barnsley. Hebblethwaite sportively but recklessly leaped across the mouth of a sinking-shaft when the other two unhappy sufferers were working at the pit-bottom, and when a fourth person, George English, was being drawn up the same shaft by a small steam engine. The engineman accidentally slipped in jumping, and he was mortally maimed by tumbling headlong down the pit. In its descent, his body came in collision with and slightly wounded George English; but strange to say, it did not fall upon or hurt Thomas Walton or William English, who were below. The mangled corpse was forthwith sent to the surface by these two miners; and directly afterwards, as they were being raised up the shaft by the little engine, an iron key which fastened the driving wheel to the drum-axle unaccountably snapped, the rope immediately received a violent jerk, the tub was suddenly upset, and its unfortunate occupants were instantly precipitated to the bottom, where they breathed their last.

Towards the end of January, a fearful explosion of fire-damp at Messrs. Ackroyd's Morley Main Colliery near Leeds, proved fatal to George Priestley and Samuel Jessop, coal hewers, and to John Clayton, a trammer. These poor fellows worked with candles in a "bank," which was said to be free from inflammable gas a few hours before this sad misfortune, but which had not more than 2,000 cubic feet of air per minute passing through it. Near to this spot was a "throw" or dislocation in the coal-bed; and at a depth of 25 yards below, another and a thicker seam of coal had been widely excavated, leaving large "goaves" which were full of fire-damp. The intervening strata having been already let down and cracked and broken by the previous removal of the deeper coal-bed, the upper seam was of course liable to be infested with combustible gas ascending up many fissures from the dangerous hollows beneath. Therefore it was especially necessary that the mining agent should be skilful and cautious in regard to ventilation and lights. Too much reliance however had here been placed on temporary and tattered canvass-sheets in lieu of permanent brick stoppings and substantial wooden doors for conducting and distributing the air-currents; and candles had generally been used instead of locked safety-lamps. The Coroner and jury strongly censured John Sykes, underground viewer of the pit, and Samuel Spurr, his deputy, for their ignorance and imprudence; and I prevailed on the owners to amend the ventilation and management of the mine, and to prohibit naked lights entirely.

In the beginning of February, John Thompson, a young pit-man at Messrs. Pope and Co.'s Haigh Moor Colliery, near Normanton, inadvertently lost his life by an explosion of fire-damp which arose from his own forgetfulness or disobedience. This undisciplined and unlucky person heedlessly went with a lantern into an abandoned and unventilated drift to fetch some clay; his own working place being at least 200 yards off. He had been distinctly told not to go to the drift, because it was producing inflammable gas, and a "fire-board" had been judiciously fixed to warn unauthorized or unwary persons from entering.

Early in March, a disastrous explosion of fire-damp happened at the Drighlington Coal Company's Doles Wood Pit near Leeds, by which three miners named Samuel Barraclough, Samuel Adams, and William Adams were mortally burnt, and four other men and boys were severely injured. The seven poor fellows were unwarrantably allowed to use candles close to an old "goaf," and near to a large "throw" or dislocation of strata, which always yielded combustible gas whenever the coal-roof broke down. This serious explosion occurred at the commencement of labour on Monday morning; and although the roof of the mine was known to have been falling freely for many hours previous to the fatal accident, yet the ventilating furnace had been neglected during the preceding Saturday night and Sunday; the air was sometimes almost stagnant, and not more than 1,500 cubic feet of air per minute ever reached the spot where the fire-damp ignited. I had frequently recommended that safety lamps should be introduced here, and that naked lights should be excluded. I had also often urged a better observance of the Rules relating to adequate ventilation and careful examination of the works, and to proper discipline among the mining superintendents and operatives; but my repeated suggestions and remonstrances were disregarded. Prudential regulations were habitually violated, and an utter indifference to danger generally prevailed until this alarming explosion took place. The Coroner and jury were unanimously of opinion that Mr. William Henry Frankland, the managing partner, and John Greenhough, the agent, and William Marshall, the underground viewer, were highly culpable in these transactions; and I therefore caused the delinquents to pay (for their misconduct) penalties amounting altogether to 80*l.*, the money being distributed among the surviving sufferers and the families of the deceased. John Greenhough and William Marshall were also summarily discharged from their situations.

About the middle of March, a young collier, William Lindley, was fatally crushed by the cage at the bottom of Messrs. Thorp & Co.'s North Gawber pit near Barnsley. Whilst poor Lindley was attempting, though unnecessarily, to take an empty corf out of the cage, the engineman, Matthew Heslop, unexpectedly—and without waiting for the customary signal—drew up the cage, and thus inflicted mortal wounds on the unfortunate miner. As the engineman had disobeyed the special Rule concerning signals, the Coroner's jury committed him for "manslaughter"; but at the Leeds assizes it was contended on behalf of the prisoner, that the deceased (not being the "hanger-on") was exceeding his duty at the time of the mishap, and that he had no right whatever to meddle with the empty corf: it was also stated in defence of the accused engineman, that he "thought a signal had been given." Under these extenuating circumstances, the Judge decided that it was a case of death by misadventure, and that the prisoner should be liberated.

During the first week of April, a boy 14 years old, named Arthur Potts, died from an explosion of inflammable gas at Messrs. Hounsfield and Co.'s Castle Colliery near Sheffield. Enoch Potts, the father of the deceased, ordered his son to fill coals in a fiery "bank," and left him there at noon with a naked light. About two hours afterwards, this untrained youth, who was working alone, either incautiously put his candle too near to the "goaf," or the fire-damp was accidentally wafted from the "goaf" to the naked light, and the poor lad was dreadfully burnt. William Rodgers, the underground viewer, and William Clayton, a deputy, were well aware that the "bank" was in a critical condition; and they also knew that twice during the preceding fortnight the combustible gas had ignited at the hewers' candles. But yet they neither withdrew the workpeople nor increased the ventilation nor supplied locked safety lamps, until after the third and fatal explosion. The Coroner's jury returned an open verdict; they would not say that the death was unavoidable, and they did not feel justified in charging any person with "manslaughter;" but they declared that considerable blame attached to the underground viewer, the deputy, and the father of the unfortunate boy. Enoch Potts was doubtless much punished by sorrow and remorse at the untimely loss of his only son; and at my instigation, a fine of 5*l.* was imposed on William Rodgers, and of 3*l.* on William Clayton, for their non-observance of Rules and their mismanagement of the pit.

Towards the end of April, John Helliwell, a coal-getter at Messrs. Topham and Co.'s Bracken Lane End Colliery near Halifax, was suddenly killed by a fall of shale from the roof of the mine. On investigating this misfortune, I found that the proprietors had never established any special Rules, and they had knowingly violated some other requirements of the law: consequently, they paid a penalty of 10*l.* for their neglect, and the money was bestowed on poor Helliwell's widow.

On the 10th of August, a quantity of coal fell in one of Messrs. Newton and Co.'s pits at Thorncliffe near Sheffield, and mortally maimed Samuel Burgin, who was engaged there as a hewer. He had received exact directions from the agent and the underground viewer, and good advice from his comrades, how and where to fix sundry wooden "sprags" for the purpose of propping up the coal, which exhibited unmistakeable indications of looseness and insecurity. Although he had easy access to a stock of these needful materials, he foolishly refrained from using them, and so lost his life through his own deplorable infatuation.

During the night of the 18th of September, Joseph Raven, an intoxicated underground labourer, was wrongfully permitted to descend the pit at Lundhill Colliery near Barnsley, when he stumbled in the cage and fell a corpse to the bottom of the shaft. As it was clearly an infringement of the special Rules to let a person in liquor go down the pit, Joseph Tunnicliffe, a deputy, and Thomas Naylor, a banksman, were strongly reprimanded for their disobedience.

Later in September, at the Wombwell Main Colliery near Barnsley, William Banks, who was employed on the pit-top, met with his death in a very peculiar way. A flat iron wire rope four inches broad and ⅞ths of an inch thick, unexpectedly snapped close to the drum above-ground, and when the engine was lifting its usual load from the pit-bottom.

The broken end of the rope flew swiftly over the pulley, and lashing quickly round the poor fellow's head, violently dragged him into the shaft. This rope had not been at work more than eleven months, and no intelligible reason could be assigned for its premature failure.

In the first week of October, a person named John Gledhill was killed through his own carelessness, by a fall of coal at Messrs. Mitchell & Co.'s Edmund's Main Colliery near Barnsley. Forgetting to put up some props which he had been ordered to set, a large mass of unsupported mineral dropped heavily upon him and buried him.

On the morning of the 23d of October, a startling explosion of fire-damp occurred at Messrs. Unwin and Co.'s Brightside Colliery near Rotherham, which inflicted mortal burns on George Parker, senr., Francis Wheelock, and George Parker, junr. Another miner, William Hobson, was also much injured. These poor fellows were removing pillars in a highly inclined seam of coal, and near to a "throw;" and although there had been two less important flashes of inflammable gas in the same pit only a few weeks prior to this fatal blast, yet neither the masters nor the men thought it expedient to use safety lamps; and there had been no daily or systematic examination of the works by the responsible agent or his inferior officers. At the inquest, the Coroner and jury decided that the general management of the mine had been very unsatisfactory, and they severely censured the superintendents; but a verdict of "accidental death" was ultimately delivered. I afterwards caused Mr. George Shaw, the acting partner, and Thomas Tweedale, the underground viewer, and George Mosley, a deputy, to pay the sum of 15*l.* as penalties for their delinquencies; the amount being given to the bereft relatives of the deceased. I also earnestly advised the owners to appoint a more skilful mining agent, to sink a new ventilating shaft, to prohibit naked lights, and either to build pack-walls or to apply brattices for the purpose of conveying more air to the upper part of every steep working place.

In the afternoon of the 25th of October, a collier named William Hall lost his life, and a youth named Samuel Ambler was seriously hurt whilst they were ascending an old pit belonging to Mr. Edward Waud, at Manston near Leeds. The wooden boards with which this dilapidated shaft was lined, having gradually rotted and broken, a loose lump of stone tumbled from the pit-side upon the heads of these two unfortunate persons when they were being drawn up in an *uncovered* cage. Mr. John Muckle, the manager, deservedly paid a fine of 5*l.* for having omitted to repair the wooden casing of the shaft and to cover the cage.

In the last week of October, an explosion of combustible gas happened at the Farnley Iron Company's Farnley Wood Colliery near Leeds, whereby Samuel Petty, a miner, was scorched to death, and his son, William Petty, was partially but not fatally burnt. Three similar accidents from fire-damp had previously occurred here in less than eighteen months; and though on each occasion the unhappy victim recovered, great personal suffering was endured. All the four explosions arose from the presence of unprotected lights in a seam of coal often troubled with inflammable gas. My inquiries further showed that the ventilating furnace was not regularly attended to; and that in other respects the special Rules were not duly fulfilled. Therefore, Samuel Robertshaw and Joseph Alderson, the underground viewers, were fined 6*l.* for their negligence; and the money was handed over to poor Petty's widow. At my recommendation the proprietors agreed forthwith to strengthen the air, to exclude candles, and to introduce locked safety lamps at this pit.

Towards the end of October, James Higgins, a deputy in Messrs. Bower and Son's Allerton Colliery near Leeds, either inconsiderately or obstinately exposed himself to the imminent danger which cost him his life. Leaving his safety lamp behind, he unjustifiably took a lantern into an abandoned place which he well knew was likely to contain fire-damp, and he came out dreadfully and incurably burnt.

In November, a boy only 14 years old, named Francis Kevitt, was unlawfully engaged on the pit-top to thrust empty corves into the cages at Messrs. Barber and Co.'s Oaks Colliery near Barnsley. Whilst this inexperienced youth was bravely though unavailingly endeavouring to perform his allotted task, he was unfortunately overpowered or overbalanced by a big corf; and slipping forward into the mouth of the shaft, he fell dead at the bottom. The Coroner's inquest and my own investigation discovered that Charles Crossley, the banksman, had illegally hired this unqualified lad as an assistant-banksman, contrary to the Rule which specifies that a person younger than 18 years shall not be so employed. It further appeared that David Tewart, the underground viewer, and Messrs. Barber and Co., the owners of the mine, had tacitly acquiesced in the offence; and therefore I caused the delinquents to pay penalties amounting to 11*l.*, which were bestowed on the destitute mother of the deceased boy.

In the first week of December, David Mather, a workman at Mr. William Day's Mount Osborne Colliery near Barnsley, was suddenly killed through his own disregard of the special Rules. He imprudently persisted in going up the drawing shaft with a couple of iron tram-rails in his hands. During his ascent, the rails struck violently against some part of the wooden framing, and forced the cage out of the "conductors," and precipitated its unlucky occupant down the pit. Thomas Green, the "hanger-on" at the bottom, was also blameable for allowing Mather to take tram-rails up the shaft in opposition to the Rules. Consequently, Green was fined 2*l.* for his misconduct; the money being given to the poor widow of the deceased.

I have the satisfaction to inform you that the persons seriously (*though not fatally*) injured at the collieries and ironstone mines and new sinking pits of the West Riding, were not so numerous in the year 1865 as they were in the year 1864; but still the list is lamentably formidable, as it actually includes the names of 110 men and boys.

Fifty-eight of these unfortunate individuals had their limbs fractured or their bodies maimed by unexpected falls of roof or coal or ironstone, many of which might have been prevented by the timely application of suitable props and "sprags."

Twenty persons grievously suffered but ultimately recovered from burns, which were produced by fire-damp; and it is no exaggeration to say, that in a vast majority of both fatal and non-fatal explosions which have happened in Yorkshire during the last and several preceding years, the combustible gas was ignited by candles or matches or gunpowder.

Fourteen poor men and boys were more or less severely lamed and crushed by corves, which either ran against them or over them; and whilst some of these events were probably unavoidable, there is nevertheless good reason to believe that in two or three cases the mischief might have been averted if sufficient places of refuge and more lights had been provided in the subterranean roads.

The remaining 18 accidents which inflicted great pain but not death on the unhappy workpeople, arose from machinery, explosions of gunpowder, minerals or materials falling in shafts, persons tumbling down pits, and from miscellaneous causes.

The following additional particulars concerning the list of *non-fatal* but yet melancholy misfortunes should be recorded.

At Waterloo Colliery near Leeds, a man was partially burnt by needlessly sticking his candle close to the roof of the mine and in the "goaf," where he quickly kindled some firedamp.

At Hollingthorp Colliery near Wakefield, a hewer thoughtlessly went with a naked light (but without authority) into an unbratticed boardgate, and immediately ignited a portion of inflammable gas, which sadly scorched him.

At Waterloo Colliery near Leeds, another miner got himself burnt when in the "goaf," where he ought not to have been. On imprudently lifting his candle up to the roof, a blaze of fire-damp fiercely rushed upon him.

At Woodthorp Colliery near Sheffield, and at Hoyland Colliery near Barnsley, two persons were greatly injured by corves on the underground tramways; and at my suggestion, more room and refuge places were subsequently made.

At Gregory Spring Colliery near Huddersfield, two miners worked with locked safety lamps in an unventilated drift, which yielded explosive gas. One of them, James Henry Hayley, began to beat out the fire-damp with his coat, when a lucifer match in the pocket accidentally kindled the gas, and he was slightly burnt. David Ellam, the deputy in this pit, was fined 20*s.* for not fixing brattice or air-pipes in the drift; and Hayley was also fined 10*s.* for unlawfully taking lucifer matches there.

At St. John's Colliery near Wakefield, two poor fellows who were cautiously pursuing their ordinary avocation with locked safety lamps, became unexpectedly enveloped in flames by the unwarrantable act of a careless person not known, who trespassed into their working place with a naked light, and instantly ignited some fire-damp which suddenly appeared about the same time.

At Methley Junction Colliery near Leeds, a hewer named Thomas Wood, had one of his legs broken by a heavy fall of coal which he had already undermined; but, forgetful of the special Rule requiring him to set wooden "sprags" for his own protection, he inadvertently brought upon himself much bodily affliction.

At Willow Bank Colliery near Barnsley, a miner was sorely burnt in an unbratticed "heading," though he used a locked Davy lamp. When the combustible gas flashed inside his lamp, he hastily tried to blow out the flame instead of drawing down the wick; he thereby drove the blaze through the meshes of the wire gauze, and kindled the fire-damp outside. Two underground viewers, George Musgrave and William Fareham, paid penalties amounting to 8*l.* for having neglected the ventilation in this case.

At Waterloo Colliery near Leeds, an undisciplined youth left his own work, and (contrary to Rule) wandered heedlessly with a candle to an abandoned part of the mine which contained explosive gas, and he came out dreadfully burnt. The dangerous spot had neither been properly aired, nor duly examined, nor guardedly fenced with a bar and "fire-board;" therefore John Sheldon, the mining agent, and John Moss, the underground viewer, were fined 8*l.* for these offences. As this was the third time in seven months that fire-damp had been ignited here by naked lights, I deemed it my duty urgently to recommend that Stephenson's safety lamps should forthwith be introduced by the proprietors.

At Blacker Main Colliery near Barnsley, two men were unfortunately burnt by foolishly raising a candle to a cavity in the fallen roof of the Thick Coal, and some combustible gas concealed above was speedily blazing. On the occurrence of a former fire-damp accident in this pit, I advised the owners to abolish naked lights entirely, and they adopted my suggestion to a certain extent; but they unwisely declined to substitute safety lamps throughout the mine. Of course, I repeated my advice more strenuously when this second explosion happened.

At Manston Colliery near Leeds, a hewer unnecessarily approached the edge of the "goaf" with a candle, and so set fire to the inflammable gas which was lurking there; the result being that he got partially burnt. My investigation of this matter clearly showed that George Mosby, underground viewer, and Thomas Bickerdike, a deputy, had also violated the Rules; and they paid the sum of 5*l.* as penalties for their disobedience.

During the last twelve months as in previous years, I have received from colliers and others residing in different localities of my district, written and verbal complaints and representations relating to inadequate ventilation or bad management or lax discipline or hazardous practices in pits; also concerning insecure and unfenced shafts, defective ropes and machinery, want of safety lamps and indispensable materials, neglect of prudent regulations, and disregard of the requirements of the Mining Acts.

On this subject I am glad to be able to state that I have generally though not always succeeded, by means of amicable negociation, in obtaining fair and efficient remedies for such complaints as I have found to be correct and capable of redress.

In several cases, however, more stringent proceedings were unhappily needful: colliery superintendents were either reprimanded or dismissed, and both workmen and masters were fined; the proprietor of one pit (Mr. John Armitage of Deepcar, near Sheffield) paying a penalty of 5*l.* for omitting to establish special Rules.

I regret to have to inform you that the educational clauses of the Mining Act are beginning to operate less satisfactorily in Yorkshire; and neither the employers nor the employed seem willing to be troubled with the production of monthly certificates of school attendance by boys above 10 but under 12 years of age, who cannot read and write.

I now beg leave humbly to submit for your consideration sundry alterations and amendments which, in my judgment, might advantageously be introduced into the Statute 23 & 24 Vict. c. 151, and into the working thereof.

At the same time I wish respectfully to allude to a parliamentary document entitled the "Miners Petition" of March 1865; and to offer a few observations on the various changes which the Petitioners beseech the Legislature to make in the laws affecting collieries and mines.

In the first instance, the Petitioners declare that on account of the want of a uniform method of weighing coal and ironstone at the pit-top, the miners are subjected to great hardship from the impossibility of the just quantity or value of their labour being known to them; and they desire a new enactment rendering it compulsory for minerals to be paid for by weight only, and requiring a true weighing-machine to be fixed on every pit-top.

I am of opinion that there can scarcely be any valid objection to this request. The 29th section of the Mining Act at present provides, that "where the persons employed "in any coal mine, colliery, or ironstone mine are paid by the weight, measure, or gauge "of the coal, ironstone, or other material gotten by them, such coal, ironstone, or other "material shall be truly weighed, measured, or gauged accordingly."

And I would suggest that section 29 be amended by erasing all the words that refer to measuring or gauging, and by empowering a majority of the miners at any pit to appoint and pay a check-weighman; the owner furnishing imperial weights and an accurate machine, which in case of dispute might be tested by the local inspector of weights and measures.

The Petitioners further allege that their families are seriously inconvenienced, and sustain much loss on account of the length of time their wages are withheld by their masters; thus making them dependent on truck shops for the supply of their domestic necessities; and the Petitioners therefore pray that a uniform custom of paying wages weekly may be established by law.

My own impression is, that Parliament has already made the "truck system" illegal; and the 28th section of the Mining Act positively directs that wages shall be paid "in money." I believe the requirement may now with fairness be extended, by inserting the words "*every week*" in this section.

The Petitioners also deeply lament the low social condition of miners, which they attribute chiefly to a want of opportunity and means to educate their children; and they deem it impossible to make colliers an intelligent class of men so long as boys descend the pit at 10 years old. Consequently, the Petitioners urge that boys be not permitted to enter mines till they are 12 years of age, and that the working time be limited to eight hours per day for all under 14 years of age.

I do not think that industrious and steady and provident workmen are devoid of means and opportunity to instruct their children; but additional opportunity may reasonably be granted to all of them, by enacting that after the 30th of June 1868, boys younger than 12 years shall not be allowed to enter mines. It may also be desirable that the Legislature should resolve that after the above-mentioned date, boys unable to read and write shall not be eligible to work in a mine; of course preserving intact the industrial rights of those previously employed. I apprehend that it would be impolitic, if not impracticable, compulsorily to limit the hours of labour in pits.

The Petitioners then assert, that the fearful sacrifice of life in mines abundantly shows that the legislative measures hitherto passed have proved totally inadequate for securing the personal safety of the workpeople.

But I am decidedly of opinion that the Colliery Acts have operated successfully and beneficially for all classes of the mining community. Nevertheless, these Acts are no doubt susceptible of several other salutary additions and improvements besides those I have been recommending.

For example; vexatious and obstructive arguments have arisen as to what is *legally* an ironstone mine: therefore, I would suggest that the preamble and section 7 of the Statute, 23 & 24 Vict. c̄. 151, should be altered so as to include *all* "mines of ironstone of the "coal measures;" omitting from the preamble the word "certain," and erasing in section 7 the phrase,—"and worked in connexion with coal or with any disused or exhausted coal "mines."

The present arbitration clauses of the Mining Act are manifestly partial and imperfect; and they may be made much more satisfactory and effective by reverting to the terms set forth in the sixth, seventh, eighth, and ninth pages of the Bill for the Regulation and Inspection of Mines, which was printed by order of the House of Commons on the 14th of February 1860. (See also the arbitration clauses in the fifth, sixth, tenth, and eleventh pages of Lord Kinnaird's Bill, relating to Metalliferous Mines, and printed 30th March 1865.)

Explosions of inflammable gas may be considerably diminished (but I will not say wholly averted) by the universal adoption of safety lamps united with good ventilation in *fiery mines*; and the exclusive use of safety lamps in such mines might advantageously be required by law.

Shaft accidents may also be rendered less frequent by enacting a new General Rule, that every drawing-pit shall be provided with suitable guide-rods or "conductors," and with self-acting guards or fences at the top.

The existing fines leviable on owners and managers for violating the provisions of the Mining Acts, may with propriety be increased; and a *minimum* amount of pecuniary penalty on them ought to be specified, seeing that their personal liberty is not at stake, whilst inferior officers and workmen are liable to be imprisoned. The Factory Act and the Print Works Act fix the minimum as well as the maximum fines.

The Petitioners further announce, that the practice in the Staffordshire collieries of working the Thick Coal in more than one face, is highly dangerous and very destructive to life; and they ask Parliament to prohibit the practice.

It is clearly obvious to me, that the matured judgment of such Government Inspectors and mining engineers as have had sufficient experience in the Staffordshire district, may with great advantage be taken on this local question; but at present, I strongly doubt the wisdom of parliamentary interference on the subject.

The Petitioners next express their opinion that the loss of life in the ironstone and limestone mines of the United Kingdom affords ample evidence that legislative supervision should be extended to them; and accordingly the Petitioners pray, that "the "inspection system" may be applied to all ironstone and limestone mines.

Being fully convinced that the Colliery Acts and the exertions of Government Inspectors have been and are productive of much good, I am quite inclined to believe that somewhat similar legislation and inspection, with certain necessary variations and modifications, may now be extended with benefit to mines of every sort.

The Petitioners then state that the practice of employing females on or about the pit banks of collieries and mines, is degrading to the sex, leads to gross immorality, and is a foul blot on English civilization and humanity. Therefore, the Petitioners entreat Parliament to prohibit such objectionable employment.

I cordially agree with the Petitioners that females should not be permitted to work at the pits; and, partly following a precedent in the first section of the Statute 5 & 6 Vict. c. 99., I would suggest that the custom now complained of should absolutely cease at the end of one year after the passing of an Act to abolish the evil.

The Petitioners further declare their belief that the sacrifice of life in collieries and mines can only be prevented by the appointment of a sufficient body of Sub-inspectors, whose duty should be to examine the pits internally; and the Petitioners request "that " a sufficient number of Sub-inspectors be appointed to aid the present Inspectors, so as " to render inspection of mines efficient, or to act in such manner as Parliament may " decide."

I may here be allowed to remark, that the first promoters of colliery legislation were never so sanguine as to suppose that loss of life in pits could be *entirely obviated* by Government supervision; nor was it ever intended, as some persons seem to imagine, that Her Majesty's Inspectors should (as it were) direct the management of mines; for if so, they must inevitably bear the responsibility. And unless the Inspectors were nearly as numerous as the chief colliery agents, and had at their command a phalanx of subordinate officers with control over the expenditure, it would be quite preposterous for them to attempt such a gigantic and unwarrantable task.

Nevertheless, I venture with due deference to represent to you that 12 Inspectors are too few to carry out efficiently the practicable and reasonable intentions of the benevolent originators of the Mining Acts; seeing that there are now more than 3,200 collieries in Great Britain.

I therefore think that it would be advisable for the Secretary of State to exercise the power vested in him by the eighth section of the Statute 23 & 24 Vict. c. 151. and moderately to increase the present number of Inspectors, whose social position and professional attainments should be commensurate with those of eminent mining engineers resident in each district.

But I hesitate to recommend the appointment of what the Petitioners call a "body of " Sub-inspectors." The interference of Sub-inspectors would probably be repelled by colliery owners and agents, with whom their official opinions and suggestions would often not have sufficient weight and cogency. Serious misunderstandings and bitter controversies might frequently be thus engendered, which would necessitate the authoritative and coercive interposition of the chief Inspectors, and would tend more to weaken than to strengthen the legitimate functions and influence of the latter, and to retard the peaceful and successful administration of the law.

I firmly believe that it would be prudent forthwith to divide several of the heaviest districts, and to augment the staff of Inspectors from 12 to 16. The West Riding of Yorkshire, for instance, ought to be divided into two districts and to have two Inspectors: it contains more coal miners than any other district in the kingdom, and only one possesses more collieries. In a majority of the districts there are less than 230 mines to each Inspector; but the West Riding Inspector has now more than 420.

The Petitioners also complain that the constitution and practice of Coroner's courts, so far as they relate to accidents in mines, are so objectionable that justice is not secured to the Petitioners; and therefore they desire that "not less than one-half of the number " of jurors who form the panels in Coroner's courts, shall be composed of operative " miners."

It is almost superfluous for me to say that one essential requisite in an English jury is *impartiality*; but this admirable qualification is not likely to be obtained by enacting that six of the 12 jurors at a Coroner's inquest on a colliery case, shall be operative miners.

My own impression is, that if the jury consisted of respectable householders living in adjoining townships, rather than in the township where the accident occurs, and if all colliery owners, agents, and workmen were excluded from the panel, a more equitable result would be arrived at.

It would perhaps be right and expedient also to empower the Coroner and jury summarily to fine or imprison mining proprietors or officers or labourers, who, by their culpable mismanagement or neglect, may have indirectly caused death in or about a pit. This would enable the jury to return a verdict *intermediate* betwixt "manslaughter" and

" accidental death ;" and if a pecuniary penalty were levied, the money might appropriately be bestowed on the surviving sufferers, or on the deserving relatives of the deceased.

Finally, the Petitioners allege that " accidents in mines are mainly caused by a want " of skill in the agents, overmen, and chief managers of collieries and mines, and from " lack of diligence or want of care on the part of the subordinate officers." Consequently, the Petitioners further pray that all agents, overmen, or chief managers of mines be subjected to a scientific examination, and that a certificate of competency be given by some qualified person or board of examiners, previous to any mine being placed under their charge.

During many years of experience as Government Inspector, I have ascertained that some of the lamentable misfortunes referred to by the Petitioners were purely accidental; others were distinctly attributable to the incompetence or negligence of persons having control over the mines; not a few were assuredly owing to the thoughtlessness or wilfulness of the operatives themselves; and a large majority of these sorrowful events could clearly be traced to either the agents' or the workmen's ignorance of or inattention to judicious maxims, Rules, and regulations.

I am of opinion, however, that no official-examination of chief or subordinate managers of mines, as to their *scientific acquirements* only, would satisfy a qualified examiner or a cautious employer as to their practical judgment and knowledge of mining, or as to their general trustworthiness and fitness for conducting a colliery and guiding the workmen.

I have, &c.,
Charles Morton,
Inspector of Mines.

To the Right Hon. Sir George Grey, Bart, M.P.,
Her Majesty's Principal Secretary of State for
the Home Department, Whitehall, London.

TABULAR LIST of FATAL MINING ACCIDENTS in YORKSHIRE, referred to by MR. MORTON, in his Report for the Year ended 31st December 1865.

Number of Fatal Accidents.	Date of Death.	Number of Lives lost.	Names of the Persons killed.	Names of the Mines where Accidents occurred.	Where situate.	Names of the Owners.	Whether Coal Mine, Ironstone Mine, or Sinking Pit.	Cause of Death.
	1865.							
1	January 9	1	Thomas Dibb	Whitwood	Normanton	Briggs and Co.	C.	Falling down the shaft.
2	,, 11	1	Benjamin Webster (a boy)	Millshaw	Holmfirth	Hepworth Iron Co.	C.	Fall of roof in the mine.
3	,, 19	2	Nathan Firth, and Henry Spurr (a boy)	Milnthorp	Wakefield	Messrs. Charlesworth	C.	Explosion of fire-damp.
4	,, 20	3	William Hebblethwaite, Thomas Walton, and William English.	Hall Royd	Barnsley	Haynes and Co.	S.	Falling down the shaft.
5	,, 21	1	John Ramsden	Middleton	Leeds	Brandling's Trustees	C.	Ditto.
6	,, 26	3	George Priestly, Samuel Jessop, and John Clayton (a boy).	Morley Main	Ditto	Messrs. Ackroyd	C.	Explosion of fire-damp.
7	February 2	1	John Thompson	Haigh Moor	Normanton	Pope and Co.	C.	Ditto.
8	,, 10	1	William Green (a boy)	Victoria	Wakefield	Hudson and Co.	C.	Run over by corves in the mine.
9	,, 22	1	Albert Bethel	Holmes	Rotherham	Holmes Coal Co.	C.	Fall of roof in the mine.
10	,, 25	1	John Ferns	Silkstone Fall	Barnsley	Booth and Co.	C.	Fall of coal in the mine.
11	March 2	3	Samuel Barraclough, Samuel Adams, and William Adams.	Doles Wood	Leeds	Drighlington Coal Co.	C.	Explosion of fire-damp.
12	,, 9	1	Henry Mirfin	Fence	Rotherham	Fence Coal Co.	C.	Fall of coal in the mine.
13	,, ,,	1	William Townend	Mount Osborne	Barnsley	William Day, Esq.	C.	Ditto.
14	,, 17	1	William Lindley	North Gawber	Ditto	Thorp and Co.	C.	Crushed by the cage at the bottom of the shaft.
15	April 5	1	Arthur Potts (a boy)	Castle	Sheffield	Hounsfield and Co.	C.	Explosion of fire-damp.
16	,, 15	1	James Hirst	Wombwell Main	Barnsley	Wombwell Main Coal Co.	C.	Crushed by corves in the mine.
17	,, 21	1	John Helliwell	Bracken Lane End	Halifax	Topham and Co.	C.	Fall of roof in the mine.
18	,, 24	1	Robert Hallas	Gregory Spring	Huddersfield	Mr. J. Sheard	C.	Ditto.
19	May 3	1	William Holliday	Gildersome	Leeds	Messrs. Holliday	C.	Ditto.
20	,, 10	1	Alfred Heseltine	Holmes	Rotherham	Holmes Coal Co.	C.	Fall of coal in the mine.
21	June 13	1	Robert Cockhill	Haigh Moor	Normanton	Pope and Co.	C.	Ditto.
22	July 4	1	Thomas Martin	Holmes	Rotherham	Holmes Coal Co.	C.	Fall of roof in the mine.
23	,, 7	1	Charles Mortomley	Edmunds Main	Barnsley	Mitchell and Co.	C.	Fall of coal in the mine.
24	,, 24	1	William Wardman	North Bierley	Bradford	Low Moor Iron Co.	I.	Fall of roof in the mine.
25	,, 25	1	Joseph Dawson	Oaks	Barnsley	Barber and Co.	C.	Run over by corves in the mine.
26	August 10	1	Samuel Burgin	Thorncliffe	Sheffield	Newton and Co.	C.	Fall of coal in the mine.
27	,, 14	1	William Brotherton	Oaks	Barnsley	Barber and Co.	C.	Falling down the shaft.
28	,, 22	1	George Robshaw	Clifton	Halifax	Low Moor Iron Co.	C.	Fall of roof in the mine.
29	,, 24	1	Thomas Singleton	Ingleton	Settle	Joseph Hunter, Esq.	C.	Fall of coal in the mine.
30	,, 30	1	Luke Hawley	Haigh Moor	Normanton	Pope and Co.	C.	Ditto.
31	September 12	1	George Renton	Victoria	Wakefield	Hudson and Co.	S.	Falling down the shaft.

Tabular List of Fatal Mining Accidents in Yorkshire—*continued.*

Number of Fatal Accidents.	Date of Death.	Number of Lives lost.	Names of the Persons killed.	Names of the Mines where Accidents occurred.	Where situate.	Names of the Owners.	Whether Coal Mine, Ironstone Mine, or Sinking Pit.	Cause of Death.
	1865.							
32	September 14	1	Charles Kay (a boy) -	Babes in the Wood -	Dewsbury -	Crawshaw and Co. - -	C.	Run over by a corf in the mine.
33	" 15	1	William Coope - -	Middleton - -	Leeds - -	Tetley and Co. - - -	C.	Explosion of gunpowder in the mine.
34	" 18	1	Joseph Raven - -	Lundhill - -	Barnsley -	Lundhill Coal Co. - -	C.	Falling down the shaft.
35	" 29	1	William Banks - -	Wombwell Main -	Ditto - -	Wombwell Main Coal Co. -	C.	Breaking of a flat iron wire pit-rope.
36	October 6	1	John Gledhill - -	Edmunds Main -	Ditto - -	Mitchell and Co. - -	C.	Fall of coal in the mine.
37	" 15	1	James Clay - - -	Wombwell Main -	Ditto - -	Wombwell Main Coal Co. -	C.	Ditto.
38	" 23	3	Francis Wheelock, George Parker, sen., and George Parker, jun. (a boy).	Brightside - -	Rotherham -	Unwin and Co. - - -	C.	Explosion of fire-damp.
39	" 25	1	William Hall - -	Manston - -	Leeds - -	Edward Waud, Esq. - -	C.	Fall of stone in the shaft.
40	" 30	1	Samuel Petty - -	Farnley Wood -	Ditto -	Farnley Iron Co. - -	C.	Explosion of fire-damp.
41	" 31	1	James Higgins - -	Allerton - -	Ditto - -	Bower and Sons - -	C.	Ditto.
42	November 14	1	Samuel Sadler - -	Brightside - -	Rotherham -	Unwin and Co. - -	C.	Fall of roof in the mine.
43	" 24	1	Francis Kevitt (a boy) -	Oaks - -	Barnsley -	Barber and Co. - -	C.	Falling down the shaft.
44	December 4	1	David Mather - -	Mount Osborne -	Ditto - -	William Day. Esq. - -	C.	Ditto.
45	" 7	1	Thomas Dickinson - -	Whitwood - -	Normanton -	Briggs and Co. - - -	C.	Fall of roof in the mine.
46	" 13	1	George Warris - -	Elsecar - -	Rotherham -	Earl Fitzwilliam - -	C.	Ditto.
47	" 15	1	Joseph Noble - -	Victoria - -	Wakefield -	Hudson and Co. - -	C.	Fall of coal in the mine.
	Total -	56						

Number of lives lost in coal mines - - - - - - - - - - -	- (marked C. in the above list)	- - -	51
Ditto in ironstone mines - - - - - - - - - - -	- (marked I. ditto)	- - -	1
Ditto in experimental or trial shafts, technically termed "new sinking pits" - - - -	- (marked S. ditto)	- - -	4
	Total	- - -	56

Charles Morton,
Inspector of Mines.

MINES.

REPORTS

OF

THE INSPECTORS OF MINES,

TO

HER MAJESTY'S SECRETARY OF STATE,

For the Year 1866.

Mr. DUNN.
Mr. ATKINSON.
Mr. DICKINSON.
Mr. HIGSON.
Mr. EVANS.
Mr. WYNNE.
Mr. BROUGH.
Mr. BAKER.
Mr. WALES.
Mr. MOORE.
Mr. ALEXANDER.
Mr. VERNER.
Mr. MORTON.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
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FOR HER MAJESTY'S STATIONERY OFFICE
1867.

18482.

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A RETURN,

SHOWING

The NUMBER of MALE COAL MINERS EMPLOYED in and about the COAL MINES of GREAT BRITAIN, the NUMBER of FATAL ACCIDENTS and LIVES LOST, the QUANTITY of COAL RAISED, and the PROPORTION of ACCIDENTS and LIVES LOST to the NUMBER of PERSONS EMPLOYED and the TONS of COAL RAISED.

NAMES OF DISTRICTS.	Number of Male Coal Miners Employed as per Census 1861.	IN THE YEAR 1866.								
		As computed by each Inspector for his own District.		Separate Fatal Accidents.	Lives Lost by the Accidents.	Persons Employed per Separate Fatal Accident.	Persons Employed per Life Lost.	Tons of Coal Raised per Separate Fatal Accident.	Tons of Coal Raised per Life Lost.	Number of Collieries.
		Number of Male Persons Employed.	Quantity of Coal Raised.							
Northumberland, Cumberland, and North Durham	22,719	25,647	10,763,800	91	99	281	259	118,283	108,725	160
South Durham - - - - -	30,805	35,720	14,930,000	84	115	425	310	177,738	129,826	155
North and East Lancashire - -	23,525	25,440	6,774,000	58	69	438	368	116,793	98,173	265
West Lancashire and North Wales - -	24,302	30,000	8,000,000	105	150	285	200	79,623	55,666	180
Yorkshire - - - -	31,938	35,500	9,450,000	61	425	582	83	154,918	22,235	434
Derby, Nottingham, Leicester, and Warwickshire	23,434	27,100	7,600,000	55	58	493	467	138,182	131,034	196
North Stafford, Cheshire, and Shropshire - -	16,427	20,210	5,500,000	47	181	430	112	117,021	30,387	220
South Stafford and Worcestershire - -	25,235	27,000	10,300,000	96	109	281	248	107,292	94,495	544
Monmouth, Gloucester, Somerset, and Devonshire	21,762	26,000	6,000,000	75	81	346	321	80,000	74,074	228
South Wales - - - -	26,292	29,200	9,376,443	113	120	258	243	82,977	78,137	338
Scattered over other Counties - - -	148									
Totals,—England and Wales - - -	246,587	279,417	88,694,243	785	1,407					
East Scotland - - -	18,091	21,200	6,100,000	29	32	731	662	210,348	190,625	254
West Scotland - - - -	17,795	20,046	5,934,638	43	45	466	445	138,010	131,880	218
Totals, Scotland - - -	35,886	41,246	12,034,638	72	77					
Totals and Averages, England, Wales, and Scotland - - -	282,473	320,663	100,728,881	857	1,484	374	216	117,537	67,877	3,192

SUMMARIES.

SUMMARY of Separate FATAL ACCIDENTS in and about the COAL MINES of GREAT BRITAIN during the Year 1866.

NAMES OF DISTRICTS.	Explosions of Fire Damp.	Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				Gross Totals.
		Falls of Coal.	Falls of Roof.	Total Falls in Mine.	Overwinding.	Ropes and Chains breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gun-powder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Under-ground.	Sundries Underground.	Total Miscellaneous Underground.	By Machinery on Surface.	Boilers bursting.	Miscellaneous on Surface.	Total on Surface.	
Northumberland, Cumberland, and North Durham - -	3	8	22	30	–	–	2	6	–	–	–	1	9	2	1	–	–	3	19	–	1	26	2	3	18	23	91
South Durham - - - -	2	1	22	23	–	–	3	–	2	–	2	4	11	1	–	–	–	11	19	1	4	36	1	1	10	12	84
North and East Lancashire -	6	5	20	25	–	1	5	–	–	2	1	–	9	1	1	1	–	5	2	–	–	10	2	1	5	8	58
West Lancashire and North Wales - - - - -	11	26	8	34	1	–	4	2	2	6	1	–	16	3	1	–	–	–	7	10	–	21	7	–	16	23	105
Yorkshire - - - - -	4	12	17	29	–	2	4	4	1	2	1	3	17	2	1	–	–	1	5	–	–	9	1	–	1	2	61
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire - - - - -	6	2	23	25	–	–	–	2	1	1	1	–	5	2	–	–	–	2	7	1	–	12	2	–	5	7	55
North Staffordshire, Cheshire, and Shropshire - - -	9	9	8	11	–	–	2	3	–	3	2	–	10	–	–	–	–	5	5	–	2	12	1	1	3	5	47
South Staffordshire and Worcestershire - - -	11	39	7	46	–	–	8	7	–	3	–	6	24	4	1	–	–	–	2	–	6	13	–	–	2	2	96
Monmouthshire, Gloucestershire, Somersetshire, and Devonshire - - -	5	15	23	38	–	–	3	1	1	5	3	5	18	1	–	–	–	4	7	–	1	13	–	–	1	1	75
South Wales - - - -	8	10	38	48	–	–	7	1	1	1	1	4	15	3	2	–	–	7	7	2	7	28	2	–	12	14	113
Eastern district of Scotland -	4	2	8	10	–	–	–	–	–	2	2	2	6	–	1	–	–	–	4	–	1	6	2	–	1	3	29
Western do. -	2	7	19	26	–	–	3	3	–	3	3	1	13	–	–	–	–	–	1	–	–	1	1	–	–	1	43
Total separate fatal accidents - - in 1865	71	130	215	345	1	3	41	29	8	28	17	26	153	19	8	1	–	38	85	14	22	187	21	6	74	101	857
in 1866	64	137	231	368	4	11	33	35	10	18	17	16	144	13	8	3	4	40	74	6	21	169	24	4	64	92	837
																							Increase - -				20

SUMMARY of DEATHS caused by the aforesaid ACCIDENTS in and about the COAL MINES of GREAT BRITAIN during the Year 1866

NAMES OF DISTRICTS.	Explosions of Fire Damp.	Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				Gross Totals.
		Falls of Coal.	Falls of Roof.	Total Falls in Mine.	Overwinding.	Ropes and Chains breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gunpowder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Underground.	Sundries Underground.	Total { Miscellaneous Underground.	By Machinery on Surface.	Boilers bursting.	Miscellaneous on Surface.	Total on Surface.	
Northumberland, Cumberland, and North Durham - -	4	8	25	33	–	–	2	6	–	–	–	1	9	2	1	–	–	3	19	–	1	26	2	7	18	27	99
South Durham - - -	28	1	22	23	–	–	3	–	3	–	2	4	12	1	–	–	–	15	19	1	4	40	1	1	10	12	115
North and East Lancashire -	13	5	20	25	–	1	5	–	–	2	1	–	9	1	3	2	–	5	2	–	–	13	2	2	5	9	69
West Lancashire and North Wales - - - -	53	29	8	37	1	–	4	2	2	6	1	–	16	3	1	–	–	–	7	10	–	21	7	–	16	23	150
Yorkshire - - - -	364	12	17	29	–	4	5	4	1	2	1	3	20	2	2	–	–	1	5	–	–	10	1	–	1	2	425
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire - - - -	7	2	24	26	–	–	–	2	1	1	1	–	5	2	–	–	–	3	7	1	–	13	2	–	5	7	58
North Staffordshire, Cheshire, and Shropshire - - -	142	3	8	11	–	–	2	3	–	3	2	–	10	–	–	–	–	5	5	–	2	12	1	2	3	6	181
South Staffordshire and Worcestershire - - -	14	44	8	52	–	–	8	7	–	3	1	6	25	5	3	–	–	–	2	–	6	16	–	–	2	2	109
Monmouthshire, Gloucestershire, Somersetshire, and Devonshire - - -	6	15	23	38	–	–	3	1	1	6	3	6	20	1	–	–	–	5	7	–	3	16	–	–	1	1	81
South Wales - - - -	13	11	38	49	–	–	7	1	1	1	1	4	15	3	2	–	–	7	7	2	8	29	2	–	12	14	120
Eastern district of Scotland -	5	2	9	11	–	–	–	–	–	2	3	2	7	–	1	–	–	–	4	–	1	6	2	–	1	3	32
Western do. -	2	7	20	27	–	–	3	3	–	3	4	1	14	–	–	–	–	–	1	–	–	1	1	–	–	1	45
Total lives lost in 1866 - -	651	139	222	361	1	5	42	29	9	29	20	27	162	20	13	2	–	44	85	14	25	203	21	12	74	107	1484
Do. do. in 1865 - -	168	145	238	381	4	29	37	35	10	19	22	16	163	14	9	6	4	40	74	6	26	179	24	5	64	93	984
																							Increase - -				500

SUMMARY of Separate FATAL ACCIDENTS in and about the INSPECTED IRONSTONE MINES of GREAT BRITAIN during the Year 1866.

NAMES OF DISTRICTS.	Explosions of Fire Damp.	Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				Gross Totals.
		Falls of Ironstone.	Falls of Roof.	Total Falls in Mine.	Overwinding.	Ropes and Chains breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gun-powder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Under-ground.	Sundries Underground.	Total Miscellaneous Underground.	By Machinery on Surface.	Boilers bursting.	Miscellaneous on Surface.	Total on Surface.	
Northumberland, Cumberland, and North Durham	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
South Durham	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
North and East Lancashire	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
West Lancashire and North Wales	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Yorkshire	–	–	3	3	–	–	1	–	–	–	–	–	1	–	–	–	–	–	1	–	–	1	–	–	1	1	6
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire	–	–	1	1	1	–	–	2	–	–	1	1	5	–	–	–	–	–	1	–	–	1	–	–	1	1	8
North Staffordshire, Cheshire, and Shropshire	1	9	3	12	–	–	2	–	–	3	–	–	5	–	–	–	–	3	–	–	–	3	–	–	–	–	21
South Staffordshire, and Worcestershire	1	3	3	6	–	–	–	1	–	–	1	–	2	–	–	–	–	–	–	–	1	1	–	–	1	1	11
Monmouthshire, Gloucestershire, Somersetshire, and Devonshire	–	3	9	12	–	–	1	–	–	–	–	–	1	–	–	–	–	1	–	–	–	1	–	–	–	–	14
South Wales	–	–	5	5	–	–	–	–	–	–	2	–	2	–	–	–	–	–	1	–	–	1	1	–	1	2	10
Eastern district of Scotland	–	–	1	1	–	–	–	2	–	–	–	–	2	–	–	–	–	–	–	–	–	–	1	–	1	2	5
Western do.	1	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1	1	–	–	1	4
Total separate fatal accidents in 1866	3	17	25	42	1	–	4	5	–	3	4	1	18	–	–	–	–	4	4	–	1	9	3	–	5	8	80
Total separate fatal accidents in 1865	3	5	28	33	1	1	1	7	–	–	1	5	16	5	2	–	–	–	2	–	–	11	–	–	–	–	61
																							Increase - -				19

SUMMARY of DEATHS caused by the aforesaid ACCIDENTS in and about the INSPECTED IRONSTONE MINES of GREAT BRITAIN during the Year 1866.

NAMES OF DISTRICTS.	Explosions of Fire Damp.	Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				Gross Totals.
		Falls of Ironstone.	Falls of Roof.	Total Falls in Mine.	Overwinding.	Ropes and Chains breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gunpowder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Underground.	Sundries Underground.	Total {Miscellaneous Underground.	By Machinery on Surface.	Boilers bursting.	Miscellaneous on Surface.	Total on Surface.	
Northumberland, Cumberland, and North Durham - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
South Durham - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
North and East Lancashire -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
West Lancashire and North Wales - - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Yorkshire - - - - -	–	–	3	3	–	–	1	–	–	–	–	–	1	–	–	–	–	–	1	–	–	1	–	–	1	1	6
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire - - - - - -	–	–	1	1	1	–	–	2	–	–	1	1	5	–	–	–	–	–	1	–	–	1	–	–	1	1	8
North Staffordshire, Cheshire, and Shropshire - - -	1	10	3	13	–	–	2	–	–	3	–	–	5	–	–	–	–	3	–	–	–	3	–	–	–	–	22
South Staffordshire and Worcestershire - - -	2	3	3	6	–	–	–	1	–	–	1	–	2	–	–	–	–	–	–	–	1	1	–	–	1	1	12
Monmouthshire, Gloucestershire, Somersetshire, and Devonshire - - -	–	3	9	12	–	–	1	–	–	–	–	–	1	–	–	–	–	1	–	–	–	1	–	–	–	–	14
South Wales - - -	–	–	4	4	–	–	–	–	–	–	2	–	2	–	–	–	–	–	1	–	–	1	1	–	1	2	9
Eastern District of Scotland -	–	–	1	1	–	–	–	2	–	–	–	–	2	–	–	–	–	–	–	–	–	–	2	–	1	3	6
Western ditto - -	1	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1	1	–	–	1	4
Total lives lost in 1866 - -	4	17	24	41	1	–	4	5	–	3	4	1	18	–	–	–	–	4	4	–	1	9	4	–	5	9	81
Do. do. in 1865 -	3	5	30	35	1	1	3	7	–	–	1	7	20	7	2	–	–	–	2	–	–	11	–	–	–	–	69
																										Increase - -	12

Mr. Dunn's Report.

REPORT as to the MINE INSPECTION ACT in the NORTHERN DISTRICT, from 1st January to 6th November 1866.—By MATTHIAS DUNN, Esq.

Wyall Villa, Upper Norwood, Surrey,
January 21st 1867.

In submitting my report it is important to observe that from a succession of ill health I was under the necessity of resigning my appointment prematurely, and a successor was appointed on the 7th November, who will report accordingly.

In handing over to him my papers and records some inaccuracy occurred, but I am happy to say that in few instances any special notice is needed, otherwise than is furnished by the ordinary list with supplemental remarks.

Explosions of gas. Only two cases have occurred, viz., at Flimby Colliery by inadvertence, whereby one person was killed; and at Dearham Colliery, where two persons lost their lives, both collieries being in Cumberland.

The latter case was attended by Mr. Atkinson during my illness, and resulted in much litigation and adjournments of the jury, as to whether considerable blame did not attach to the managers of Mr. Walker. The proceedings were published in the Maryport papers of the day, which I enclose, as forming the most important document which has occurred during the year; a prosecution was long threatened, but at length given up.

In resigning my appointment into the hands of another I beg humbly to remark that the district is placed in a most satisfactory condition with respect to the safety of the future, as I have given it the full benefit of my valuable knowledge and experience.

MATTHIAS DUNN,
Ex-Inspector.

THE DEARHAM EXPLOSION.

IMPORTANT COLLIERY INQUEST.

An adjourned inquest was held at the old School-house, Ellenborough, on Monday last, before Mr. Howson, deputy coroner, and a respectable jury, on the bodies of Benjamin and Thomas Varty, brothers, who were so severely burnt, on the 18th ult., by an explosion in the Dearham Outgang pit, the property of Messrs. Walker of Maryport, that they both died. Mr. Atkinson, the government inspector of mines for Durham was in attendance. The examination of witnesses occupied above four hours, and the inquiry was then again adjourned till Wednesday, the 11th. As the subject is very important in this district we give the evidence *in extenso.*

Before proceeding with the witnesses it was suggested by some of the jury that the room be cleared of all except the jury and the witness under examination, lest their presence might have an injurious effect on the freedom of the witnesses. On this intimation Mr. Walker and others connected with the colliery withdrew.

Isaac Dixon, engineman, sworn: Lives at Dearham. Is in the employ of Messrs. Walker, turned five years, at Lonsdale pit. I knew the two Vartys, and saw Ben alive and well on the Sunday evening (the 17th) before they went down the pit. They were employed as coal haggers, in Lonsdale pit. Ben came into the engine-house for a light, and I understood his brother was waiting at the pit-top to go down. Three more coal haggers, who were working on the opposite side of the pit, had gone down about a quarter of an hour before. I cautioned him, and told him not to go down into that place unless he had got a lamp. He said he had left it clear of gas on Saturday night at half past six. He had no lamp, but an open lighted candle. I lowered him down, because he promised to go and get a few tubs cut of his uncle James's place. I refused to lower him down till he promised not to go into his own working, which my brother had informed me was dangerous. I knew by repute that his uncle's place was the ten quarters, and free from gas. I shortly after heard a signal to lower and saw two men on the cage with open lights, and I lowered the cage to the bottom of the shaft. The banksman had not come, and did not come till six o'clock. I had the usual signal that they were at the bottom. There were only five persons in the pit at the time. I did not know that anything was wrong till about twenty minutes after, when a signal came from the bottom of the shaft to lower the cage, and when it came up it contained the brothers Thomas and Benjamin Varty. There was no hooker-on at the bottom, nor any banksman at the top, as they draw no coals at nights. I believe there is a rule requiring them to be present when any person is let down. I have seen such a rule, but I never had a copy given to me.

By the Inspector: Have you seen a rule requiring that no man is to be lowered in the cage without a distinct order from the banksman?—Witness: No, I have not. Had I known that, I would not have lowered the men.

Examination resumed: When the two men came up I did not see what was the matter with them, but the younger (Thomas) was shouting very much as if in pain. I saw then that they were both burnt. They were taken into a house in the pit yard, where they were oiled and every care taken of them. Dr. Thompson was sent for, and he attended immediately. A cart was got and they were sent home about half past two. I had a conversation with them, and they both hoped they would get better. I went on duty on Sunday noon to pump water from the pit.

By the Inspector: When is the regular time for commencing the night shift?—Witness: As soon as Sunday is out; and I had orders to let men down at that time. I have orders to do so from Mr. Nixon, the manager or steward, who always ordered the men not to go into the little band unless they had lamps. Inspector: Do you pump with the same engine as you wind with?—No. Do you attend to both engines? —Sometimes. Were you attending to both engines at the time in question?—The fireman and I did so.

Re-examined: Were you asleep at all after you lowered the men down?—No. I heard the raps, ten in number, with the hammer. None of the men who went down the pit were overmen or deputies, nor had any been down on the Sunday from the time I went to work, and I told the deceased this. The deputy or overman is not in the habit of going down, and I have no orders not to let men down till some deputy or overman has gone down. There is—

By a juryman: How comes it that these men could go into this place at any other time?—The only cause of the increased danger was that the pit was standing during Sunday.

The inspector explained that tubs not passing, or an irregularity of pumping, might cause the pit to get foul.

By another juryman: Was there any lamp provided at the pit for those who had not provided themselves with one?—Witness: I had no means of providing lamps. I'm an engineman.

George Tinnion, a miner, sworn: Lives in Lonsdale pit-yard, and was there on the morning of the 18th of June. Got home from Cockermouth at five minutes past one, and I heard a great knocking at the bottom of the pit. On going outside I saw these two men come up the shaft, and they told me they were burnt to death. I took them into the house. My wife cut off, with scissors, their burnt clothing and portions of skin. Benjamin asked me to go for his father, and I did so. When I returned they were taken home in a cart. The doctor had seen them, and they had been oiled, and their wounds dressed. I saw them on the Wednesday following, and they did not then think they were going to die. I don't know that there is any law to interdict anyone going down without the presence of a banksman. The rule-board stays on the pit-top, but there is no paper on it now. I was never cautioned till after this accident about taking a lamp. They had on portions of dress which they would not have on had they reached the place of their work.

Robert Nixon, manager at the Lonsdale Pit, sworn: Lives at Dearham. Knew the deceased two miners. I have managed these collieries for 20 years. I have the sole management of the works. Mr. Walker takes an active part in the plans, and we consult him. I am acquainted with the rules of the colliery. I produce a printed copy, dated 1856, and I was informed these rules had the sanction of Mr. Dunn. I have adhered to them as strictly as possible. George Nixon is the overman in Lonsdale Pit. I may have had a copy signed by Mr. Dunn, but I know these rules were approved by Mr. Dunn in 1856. Thomas Steele and Henry Lightfoot are deputies to George Nixon in the ten-quarter district, where this accident happened. These rules were given out to the men, and one was posted at the pit-top. On the night of the 17th of June they did not examine the pit, as it is not worked till after Sunday. The accident occurred at the extremity of the heading at the ten-quarter district. This part of the pit was well ventilated by an air-shaft and furnaces, and the air was very good.

By the Inspector: We never had any complaints of bad air for a long time back. I batted the air with my cap a month or so before this accident, as I observed fire-damp there; and this was the only time I saw it, though I have heard of it. I have gone regularly once a fortnight to measure and examine the workings. It was the duty of my brother and Steele to see that the brattice was kept up to the face, and they were paid by shift for that work. Their shift commenced on the 18th of June soon after midnight, and it was the engineman's orders to let the men down then. Orders had been given not to let anyone down without a lamp. I gave these orders on the 21st of May verbally to deceased and some others, as they were then working with their lamp-tops off. They said they had lamps at home. We have no lamp-locker nor lamp-shop, nor any supply of lamps, as this is the only working with fire. I was not aware that there was any rule requiring some one to be appointed to see the lamps locked.

The Inspector: Then you ought to have known, and you are responsible for not knowing it.

Witness: I did not myself go down the pit for a fortnight after the accident. I sent by brother down to see to the brattice, but I don't know whether his lamp was locked.—Inspector: Was there any particular or extraordinary circumstance on the 17th or 18th to account for the fire-damp?—Witness: I had no reason to suspect it was there at that time.—Inspector: Are you not aware of the existence of the 2d general rule relative to the places not being in actual course of extension?—Witness: The men themselves were allowed to judge when it was safe to take the tops off their safety-lamps. I ascribe this accident to the accumulation of gas beyond the brattice.

By a juror: I never appointed a deputy to go down and examine the working before anyone else was allowed to go down the pit.

The Coroner: Are you not aware that it is a rule observed in other collieries?—Witness: I dare say it is where there is fire. I did acquaint both the Messrs. Walker that there was fire in this working.

The Inspector: Was a proper notice sent to the inspector, or the Secretary of State, within 24 hours after the explosion?—Witness: I am not aware till after the deaths occurred.—Inspector: For every such neglect, even if a single hair be singed by an explosion in a pit, if a notice is not given to either an inspector or the Secretary of State, a penalty is incurred.

Mr. T. Walker: The copy of the rules produced are in force and were sanctioned by Mr. Dunn, but I don't know whether they were submitted to the Secretary of State.—Inspector: The Act of Parliament requires this to be done, and penalties are incurred by the neglect.—Witness: I am not aware that any notice has been given to the government agent or inspector, or Secretary of State. These rules were submitted to the colliery association, and all the collieries in this neighbourhood adopted a uniform code of laws.

By a juror: Did Robert Nixon acquaint you of the existence of fire-damp in this particular working?—I have been long from home, but I have always given orders to Robert Nixon to send down a deputy where there was any appearance of fire-damp, and I don't know why this has not been done on this occasion, except that pitmen are so excessively careless in these matters.

George Nixon, overman in Lonsdale Pit for the last 13 years: It is not a fiery pit, there has been fire in odd places. Safety lamps have not been used except by the man who went in first to view the workings. This duty I performed for the first five years, but the fire ceased, and the practice was discontinued and it has not been done since. I am not aware that anyone was appointed to do this. I traversed the pit eight months after the fire-damp ceased and the air would not ignite. These men were opening out a new heading into fresh coal. I never received any orders to examine this place. We have no regular system of examining the workings before the men go in. On the morning of the 18th I went in and found some brattice thrown down and I could get no farther. We let the pit stand a few days and I went in on Friday. The explosion had taken place at the forehead; I saw no lamps. The place was not dangerous on Saturday noon when I was there. These men had orders to use safety-lamps, but they were allowed to take the lamp tops off, but they were never allowed to go in after they had been absent without their lamp tops on. On Thursday before the accident, I met the deceased and I required them to be provided with a lamp, and they promised to bring one they had at home.

Inspector: How far was the brattice generally from the face?—Never more than when you saw it. The men themselves were intrusted to put up the brattice. We have no lamps or lamp-locker.

Inspector: How is it the overman is not required to provide for the safety by a sufficient brattice?—I don't know.

Thomas Steele, shiftsman or deputy under the Nixons in the Lonsdale pit: I know the heading where the deceased were working. My duty is to supply props and to lay roads and draw out props. I do occasionally help to put up the brattice. Two or three yards would be sufficient for the men to work in a-head of the brattice.—(This witness did not know or was unwilling to tell what he observed when down the pit).—Inspector: Do you shut your eyes when you go in?—Four men had each a safety-lamp, but these two men had none. I never happened to be in the working for a fortnight before the explosion. There was fire-damp in two places besides this. I speak of five months ago, and at the spot where the explosion took place on the 18th, fire-damp was known to exist five months ago. I left off examining these spots and John Lewthwaite took it. I am aware that a rule exists requiring all lamps to be locked, and where danger exists the place is not to be entered without a locked lamp. I did not go to examine the state of the air, or the workings, when I went down the pit.

The Inspector: Then you went for pleasure!

John Lightfoot, the deputy in Lonsdale Pit: It is not considered a fiery pit, and has been worked with open lights. This particular working has been making fire-damp, and orders have been given the last three weeks not to work with open lights. The men do their own deputy work in that part of the pit, laying roads, drawing and supplying, and putting up brattice. I have examined this place sometimes, but only when the men requested me. I sometimes found a little fire-damp, and at other times none. I don't know that there was any order given to examine this place.

The inquest was then adjourned.

Wednesday.

The inquest was resumed at four o'clock, when Isaac Dixon, the engineman, was recalled, and said: I know that a banksman is required to be at the top of the shaft, and a hooker-on at the bottom when any person is let down. I had heard that this *little band* was dangerous. Benjamin Varty, on being let down, asked—" Is Tommy Steele here?" I said he was not—only the three men who had gone down at the opposite side of the pit.

Thomas Steele recalled: I was in the place on the Wednesday previous to the explosion, when George Martin and Joseph Sandham were there; and again on Saturday when the same two were working there. I then had my lamp top on, but I did not notice whether they had lamps or not. I took a walk down to see if any brattice was wanted.

George Martin: Has worked in this pit four months now lately, and knew the pit well, having worked there formerly. I worked in the same place with the two deceased, the drift leads to the ten quarters band. The two Vartys were young men and experienced miners, having been brought up to mining. There were six men working in this drift, two men each shift of eight hours. Joseph Sandham worked with me. We left off at half past one, and the two deceased followed us, coming on on Saturday about half past one. The drift further back had been making gas about a fortnight before, but I had not seen any for a week prior to Saturday, and during that time we worked with naked lights. We had been ordered by Robert Nixon to take lamps to that working. This order was given perhaps six weeks before the explosion. We provided ourselves with lamps. I never saw the deceased with safety lamps. I don't remember their ever bringing anything but candles. We none of us thought there was any danger. The deputies have been there when we have been at work with open lights. No one was there to examine or lock our lamps when we went down. I have observed slight explosions of gas in this place. When this fire was observed we used to dash it out with our shirts. When it was our turn to go to the first shift on Monday, we went as soon as Sunday was out. The brattice was then about six yards from the face. I considered it quite safe to work with naked lights. I did not consider we were transgressing the law. Robert Nixon, the viewer, has seen us working in this drift with naked lights and said nothing, though it was a fortnight after he had given us orders to work there with safety-lamps; and still we were permitted to work on.

By the Inspector: Neither my lamp nor any of the lamps used had locks upon them. No one examined the lamps for us. Steele came sometimes to put the brattice up, but I cannot say whether Steele was there on the Saturday when I was last there. I would not consider it safe, after the pit had been standing so long, to go in with a naked light.

By a Juror: How is it that you went in on former occasions after she had been standing, and would have considered it dangerous to go in on this occasion?—Witness: Well I don't know.

Joseph Sandham: Has worked in the ten-quarter band drift, and was marrow to the last witness; had worked there four months before the late explosion. It has made gas since we got the ten-quarters coal. Robert Nixon ordered us to bring lamps, and forbid us to use naked lights. After that we carried one lamp for two of us merely to try the strength of the gas, and then if it was safe we used the open lights as before. Afterwards when we discovered the gas become stronger we got two lamps. The deceased did not carry lamps, they used nothing but naked lights. I told them it was dangerous, and often remonstrated with them for their imprudence. When I saw them coming in with their lighted candles I ran away out of the spot, afraid. I did not inform any deputy of this. No one examined or locked our lamps on going in, they had no locks on them. On the Saturday before the explosion we worked with candles. I think we did so for a fortnight, as the drift was making no gas and we thought it was safe again.

By the Inspector: I don't remember whether Steele was in the drift that day when I was there. The brattice was about six yards from the forehead.

By a Juror: We have worked a whole shift with the lamp tops on after we have got to the ten-quarters coal; before that we used open lights.

Inspector: It does not follow that because safety lamps were used that the working was in an explosive condition, but they were used as a precaution. Whenever both of us left the working with a tub, we left a naked light to consume in small quantities the gas to prevent an accumulation.

John Kirkbride: Has worked in this drift at Lonsdale pit for three or four months before the explosion. It was a place that made gas—a little at times, and more at others. We got orders to use safety lamps, and I did so—but only to try the gas, and then if we found it not very strong we took off the tops, and worked with naked lights. I heard Robert Nixon give these orders.

By the Inspector: I received orders to use a safety lamp on first going in. My marrow also took a lamp. We followed the Vartys in the work. They never used lamps. I remember succeeding them at ten o'clock on the Friday night previous to the explosion. I often told them to take a lamp, but they never did. I saw nothing of Steele astir that night. During the week before the explosion we worked with our tops on, but on finding it safe we took them off. Could not say whether the deputies ever saw us with the tops off. I can't tell who went into the drift first after the explosion. Joseph Martin and I went in on Tuesday to repair the brattice, and we found a plank here and there blown out of it. I found a piece of candle sticking on the roof in the forehead, and a shovel was lying in the place. Can't account for the gas accumulating.

Richard Nixon: Works at Broughton Moor. Knew the two deceased Vartys—Benjamin, aged 22; Thomas, aged 20. I was with them when brought home, and attended on them as long as they lived. The cause of their death, no doubt, was their being burnt. On the day of the accident they spoke about the neglect of the deputies at the pit; but they then expected to get better. I was present when they died; but they never spoke of the cause of their death when they expected to die.

The Coroner: In order to make a revelation of any value as evidence made by these men, it is necessary that it be made at the time that they were dying. A man in a dying state is supposed to be speaking the truth as surely as if sworn, and that evidence is admissible; but any statement made while they thought they were not likely to die cannot be received as evidence.

[The coroner suggested that as it was now getting late—and the summing-up would occupy some time, and two verdicts would have to be considered by two juries—it would be desirable to conclude the inquest to-morrow. To this the jury objected, expressing a strong desire to finish it that night, and the proceedings were continued.]

Joseph Whitehead, a miner: Knew the two deceased. Had a conversation with Benjamin on Monday, the day of the explosion; but had no talk with him afterwards as to his chances of recovery. I never heard either of them express a doubt of their getting better.

The Coroner: You see, gentlemen of the jury, there is no possibility of admitting this as evidence; and if I took it down as such, it would vitiate your verdict, and subject me to blame.

The summing-up, which was very clear and circumstantial, occupied nearly an hour, in the course of which Mr. Howson reflected strongly on the very lax manner in which the several overmen had issued their orders without seeing them carried out, after they knew that fire was in this working, and might accumulate and explode. He could not account for the overmen's ignorance of the Act of Parliament passed in 1860 for the regulation of mines, more especially as Mr. Dunn, the inspector, had paid periodical visits, and would find that the provisions of that Act had not been observed. But this culpable neglect on the part of the overmen and their deputies, though very censurable, did not amount to such criminality as to convict any of them of manslaughter. It was in evidence that the deceased had been repeatedly warned of the danger; and efforts had been made to make the men protect themselves in spite of themselves, still they rushed into danger. The others working there, who had adopted the precautions suggested, had never created an explosion. The coroner concluded his very able summing-up by cautioning the jury to divest their minds of anything they might have heard in the village, and confine themselves to the evidence. As to the non-observance of the requirements of the Act of 1860 they must not allow that to influence their verdict, unless they could be satisfied that this neglect and ignorance of the law had directly caused the death of the deceased.

The juries retired at nine o'clock, and at one o'clock in the morning the jury on Benjamin returned a verdict of "accidental death." The jury on Thomas, composed of six of the former and six others, sat till past six in the morning, and not agreeing, were then dismissed without a verdict; the coroner binding over the jury, as well as the witnesses, in their own recognizances to appear at the next assizes at Carlisle.

AN ACCOUNT of DEATHS by ACCIDENT in the COLLIERIES of the NORTHERN DISTRICT, from 31st December 1865 to 31st December 1866, viz.:—

			In Shafts.	Explosions.	Falls of Stone.	Falls of Coal.	Sundries.	Total.
1866:								
January	7	Flimby, explosion of gas	–	1	–	–	–	1
,,	10	Cramlington, fall of stone	–	–	1	–	–	1
,,	11	Felling, run over by train	–	–	–	–	1	1
,,	12	Usworth, fell down shaft	1	–	–	–	–	1
,,	19	South Benwell, fall of roofs	–	–	1	–	–	1
,,	20	Scremerston, fell down shaft	1	–	–	–	–	1
,,	,,	Derwent Cole, fall of roof	–	–	1	–	–	1
,,	,,	Cramlington, do.	–	–	1	–	–	1
,,	,,	Cramlington, do.	–	–	1	–	–	1
,,	24	North Seaton, killed on rail	–	–	–	–	1	1
,,	28	Townley do.	–	–	–	–	1	1
February	3	Seaton Delaval, fell down shafts	1	–	–	–	–	1
,,	7	Mickley, run over by trains	–	–	–	–	1	1
,,	8	Seaton Delaval, fall of coal	–	–	–	1	–	1
,,	13	Washington, crush of tubs	–	–	–	–	1	1
,,	20	Bedlington, do.	–	–	–	–	1	1
,,	22	North Seaton, killed on trolley-way	–	–	–	–	1	1
,,	24	Cowpen, fall of stone	–	–	1	–	–	1
,,	,,	Gosforth, lock jam	–	–	–	–	1	1
,,	,,	Cleator, died without injury	–	–	–	–	1	1
,,	,,	Ivecton, fell down shaft	1	–	–	–	–	1
,,	,,	North Seaton, crushed by tubs	–	–	–	–	1	1
,,	28	Team Cole, do.	–	–	–	–	1	1
March	7	Flimby, fall of coal	–	–	–	1	–	1
,,	8	Cleator, fall of stone	–	–	1	–	–	1
,,	9	Backworth, do.	–	–	1	–	–	1
,,	14	Cambois, struck by stone	–	–	–	–	1	1
,,	15	Seghill, fall of roof	–	–	1	–	–	1
,,	19	Mount Pleasant, fall of coal	–	–	–	1	–	1
April	3	Pontop loll, crushed by tubs	–	–	–	–	1	1
,,	6	Backworth, do.	–	–	–	–	1	1
,,	10	W. Hartley, explosion of steam boiler	–	–	–	–	1	1
,,	11	East Castle, fall of coal	–	–	–	1	–	1
,,	21	Backworth, fall of stone	–	–	1	–	–	1
,,	25	Plashetts, killed by engine	–	–	–	–	1	1
		Carried forward	4	1	10	4	16	35

			In Shafts.	Explosions.	Falls of Stone.	Falls of Coal.	Sundries.	Total.
1866:		Brought forward	4	1	10	4	16	35
May	6	Cowpen, fell off tubs	–	–	–	–	1	1
,,	11	Backworth, killed on waggon way	–	–	–	–	1	1
,,	18	Cleator Moor, fall of coal	–	–	–	1	–	1
,,	26	Walker, crush of tubs	–	–	–	–	1	1
,,	27	Marley Hill, bursting of boiler	–	–	–	–	1	1
,,	,,	Killingworth, do.	–	–	–	–	1	1
June	5	Stiddle Hill, fell off screens	–	–	–	–	1	1
,,	7	Gosforth, fell down shaft	1	–	–	–	–	1
,,	25	Killingworth, fall of stone	–	–	1	–	–	1
,,	,,	Lamley, crushed by waggons	–	–	–	–	1	1
,,	28	Harton, run over	–	–	–	–	1	1
,,	29	Seaton Burn, fall of coal	–	–	–	1	–	1
July	2	Andrews House, bursting of boiler aground	–	–	–	–	4	4
,,	4	West Hartley, crushed by tubs	–	–	–	–	1	1
,,	10	Whitehaven, fall of coal	–	–	–	1	–	1
,,	,,	Dearham, explosion	–	2	–	–	–	2
,,	12	Washington, struck by iron	–	–	–	–	1	1
,,	17	Wearmouth, killed by waggons	–	–	–	–	1	1
,,	28	Scremerston, choke damp	–	–	–	–	1	1
,,	30	Walker, killed at Staith	–	–	–	–	1	1
,,	31	Wearmouth, fall of stone	–	–	1	–	–	1
August	3	North Seaton, fall of coal	–	–	–	1	–	1
,,	4	Walbottle, struck by cage	1	–	–	–	–	1
,,	11	Wearmouth, fall of stone	–	–	1	–	–	1
,,	14	Bebside, do.	–	–	1	–	–	1
,,	18	Seghill, killed on incline plane	–	–	–	–	1	1
,,	25	Cramlington, caught by rope	–	–	–	–	1	1
,,	,,	Barrington, crushed by tubs	–	–	–	–	1	1
,,	27	Tyne Main, riding on tubs	–	–	–	–	1	1
September	3	Usworth, fall of stone	–	–	1	–	–	1
,,	,,	Team Cole, run over by waggons	–	–	–	–	1	1
,,	5	Shipcole, fall of stone	–	–	1	–	–	1
,,	6	Midgeholm, explosion of gunpowder	–	–	–	–	1	1
,,	9	Workington, fall of stone	–	–	1	–	–	1
,,	12	Croppington, on waggons	–	–	–	–	1	1
,,	19	Seaton Burn, on Cole railway	–	–	–	–	1	1
,,	22	South Derwent, killed by cages	1	–	–	–	–	1
,,	26	Wearmouth, fall of stone	–	–	1	–	–	1
,,	27	Backworth, killed by waggons	–	–	–	–	1	1
October	11	Townley, getting out of cage	1	–	–	–	–	1
,,	14	Walker, injured on railway	–	–	–	–	1	1
,,	,,	Usworth, fell into quarry	–	–	–	–	1	1
,,	15	Do. came into contact with ropes	–	–	–	–	1	1
,,	,,	Killingworth, run over by tubs	–	–	–	–	1	1
,,	17	Backworth, run over by waggons	–	–	–	–	1	1
		Total	8	3	18	8	47	84

In sundries, as included in crush of tubs - 12.

Mr. Atkinson's Report.

REPORT on the INSPECTION of MINES in the SOUTH DURHAM INSPECTION DISTRICT, from the 31st December 1865 to the 31st December 1866.—By JOHN J. ATKINSON, Esq.

SIR, Chilton Moor, Fence Houses, February 28, 1867.

I have the honour, as Inspector of Mines for the South Durham Inspection District, to report to you, with reference to the operation of the Mines Inspection Acts during the year ending 31st December 1866.

The following Table shows the number of fatal accidents of different kinds, and the number of deaths that have resulted from them, in, at, and about the mines of the district, in each of the years 1862, 1863, 1864, 1865, and 1866; the last being the year embraced by this Report.

———	Number of Separate Accidents.					Number of Deaths resulting.				
	Year.					Year.				
	1862.	1863.	1864.	1865.	1866.	1862.	1863.	1864.	1865.	1866.
EXPLOSIONS OF FIRE-DAMP -	2	1	2	2	2	2	1	3	4	28
FALLS OF COAL AND STONE.										
Falls of coal - - - - -	2	5	–	1	1	4	5	–	1	1
Falls of stone - - - - -	16	35	30	20	22	16	35	30	21	22
Total falls in mine -	18	40	30	21	23	20	40	30	22	23
IN SHAFTS.										
Overwinding - - - - -	1	–	–	–	–	1	–	–	–	–
Ropes or chains breaking - -	–	1	–	1	–	–	2	–	1	–
Whilst ascending or descending -	–	3	–	5	3	–	6	–	5	3
Falling into shaft from top - -	–	1	3	2	–	–	1	3	2	–
Things falling from top of shaft -	–	–	2	–	2	–	–	2	–	3
Falling from part way down -	3	1	5	–	–	3	4	6	–	–
Things falling from part way down	–	–	–	–	2	–	–	–	–	2
Sundries in shafts - - -	–	1	5	2	4	–	1	5	2	4
Totals in shafts - -	4	7	15	10	11	4	14	16	10	12
MISCELLANEOUS UNDERGROUND.										
Explosions of gunpowder - -	–	–	–	2	1	–	–	–	2	1
Suffocation by gases - - -	–	–	–	–	–	–	–	–	–	–
Irruptions of water - - -	–	–	–	–	–	–	–	–	–	–
Falling into water - - -	1	–	–	–	–	1	–	–	–	–
On incline and engine planes -	6	9	5	9	11	6	9	5	9	15
By trams or tubs underground -	14	11	16	7	19	14	11	16	7	19
By machinery do. - -	–	–	2	1	1	–	–	2	1	1
Sundries underground - -	2	–	1	3	4	2	–	1	6	4
Total miscellaneous underground	23	20	24	22	36	23	20	24	25	40
Total underground - - -	47	68	71	55	72	49	75	73	61	103
ON SURFACE.										
By machinery on surface - -	1	3	3	4	1	1	3	3	4	1
By boilers bursting on surface -	–	–	2	–	1	–	–	6	–	1
By sundries on surface - -	6	10	7	17	10	6	10	7	17	10
Total on surface - -	7	13	12	21	12	7	13	16	21	12
GROSS TOTALS -	54	81	83	76	84	56	88	89	82	115

There are scarcely any ironstone mines under the operation of the Inspection Act in the district, and no fatal or other accidents have been reported as having occurred in them during the past year.

By referring to the preceding tabular statement it may be observed that only two fatal accidents have resulted from explosions of fire-damp in the coal mines of the district during the year 1866; one of these explosions caused the deaths of 4 persons, and the other the deaths of 24 persons, making together a loss of 28 lives from this class of accidents during the year.

This number of deaths is unusually large for this district, which, in general, may be regarded as having been remarkably free from seriously fatal accidents of this nature for some years past, when the fiery character and great extent of many of the mines are taken into consideration.

The deaths from falls of coal and stone in the mines of the district during the past year have been 23 in number, compared with an average number of 28 per year, during the preceding four years embraced by the table.

The deaths from shaft accidents during the past year have been one more in number than those which resulted yearly, upon an average of the preceding four years embraced by the table.

The deaths that have occurred in the mines of the district from accidents of a miscellaneous character (consisting for the most part of crushes by tubs) have been unusually numerous during the past year, the number having amounted to 40 during the past year; while on the average, the number per year during the preceding four years embraced by the table was only 23.

Although it may, I think, reasonably be hoped that this great increase is only of a temporary character, as I perceive no apparent cause for it, yet it is sufficiently striking to direct the special attention of all persons concerned, towards the prevention of such accidents.

The great distances which some of the workmen and boys have to travel in the extensive mines of this district before reaching and after leaving their work, hold out great temptations for them to ride upon trains of coal tubs in engine planes, where they are, by the regulations of the collieries prohibited from doing so, owing to the dangers attending the practice.

Only one of the accidents classed as miscellaneous underground accidents during the past year have resulted in more than one death, and five lives were lost by that accident while the sufferers were riding upon a train of tubs contrary to the regulations in force at the colliery; the train upon which they were riding was run into by tubs from another way, the persons in charge of them having allowed them to run amain through being unable to stop them.

On the whole, the deaths that have resulted from underground accidents in the mines of the district have been much more numerous during the past year than usual, the increase being chiefly due to the deaths from explosions of fire-damp and to crushes by tubs.

The deaths from accidents on the surface at and about the mines of the district have been rather fewer in number during the past year than on the average per year during the preceding four years embraced by the table.

Four accidents during the past year have proved fatal to more than one person each.

A detailed list of the fatal accidents that have occurred in, at, and about the coal mines of the district during the past year, 1865, is appended to this report.

Prefixed to the report are summaries of the numbers of separate fatal accidents that have occurred during the past year in the coal mines, and also in such of the ironstone mines as come within the Mines Inspection Act in each of the twelve inspection districts into which Great Britain is divided, together with separate summaries of the deaths that have resulted from such accidents.

There is also prefixed to the report a return showing the number of male coal miners employed in and about the coal mines of Great Britain, the number of fatal accidents, and of lives lost, the quantity of coal raised, and the proportion of lives lost to the number of persons employed, and to the tons of coal raised, distinguishing the twelve inspection districts.

The following comparative statement is deduced from the return last-mentioned.

——	England, Wales, and Scotland together.	South Durham Inspection District.
Number of persons employed in 1861 as per Census Tables - -	282,473	30,805
1866.		
Computed number of persons employed - - - -	320,663	35,720
Computed quantity of coal raised - - tons	100,728,881	14,930,000
Number of separate fatal accidents - - - -	857	84
Number of lives lost by accidents - - -	1,484	115
Persons employed per separate fatal accident - - -	374	425
Persons employed per life lost - - - -	216	310
Tons of coal raised per separate fatal accident - - -	117,537	177,738
Tons of coal raised per life lost - - - -	67,877	129,826
Number of collieries - - - - - -	3,192	155

Fatal Explosions of Fire-damp.

Two explosions of fire-damp in this inspection district during the first year have proved fatal to life.

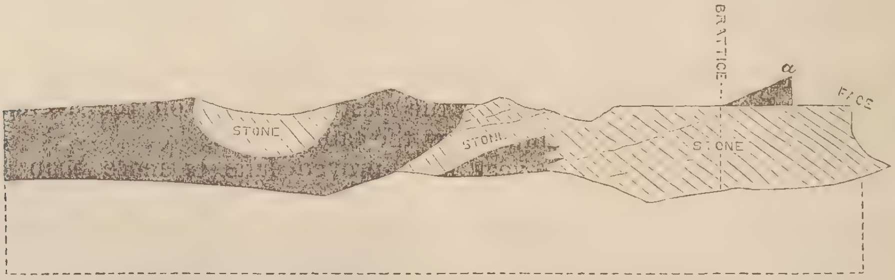
One of these explosions took place in the exploring places connected with the Harvey seam of coal at Adelaide Colliery belonging to Messrs. Josesph Pease and partners, and resulted in the loss of four lives.

At Adelaide Colliery the principal workings were carried on in a seam of coal known as the Brockwell or Auckland Main Coal Seam, and only a very few opening places were being driven near the shaft in the upper or Harvey seam of coal at the time of the occurrence.

The workings in the Harvey Seam, although all in "*the whole mine,*" were carried on with safety-lamps; the seam of coal where it was being worked, very near to the shafts, was in a disturbed state, and some of the places were being driven almost entirely in stone, blasting by powder being permitted, and special persons were appointed to fire the shots only after first carefully examining the places to ascertain that they were free from fire-damp, and that it was safe to blast.

On the 16th August 1866 Robert Davison, one of the shot firers, appears to have been firing two shots at one operation, for James Maitland and Robert Morrow who worked in the West Drift, and the explosion appears to have occurred at the second of the two shots which were fired at the same time on that occasion.

The following is a section of the drift where the explosion occurred.



Section near the face of the West Drift in the Harvey Seam at Adelaide Colliery. August 1866.

Scales - { Horizontal, $\frac{1}{2}$ chain per inch.
Vertical, 8 feet per inch.

When I examined the place after the explosion I found the ventilation to be quite sufficient to dilute and render harmless all the gas that was then generated in it, under ordinary circumstances, supposing it to have been properly applied by bratticing.

I however found a small quantity of fire-damp lodging in a hollow in the roof at the point marked "*a*" on the section, about four feet back from the face, where a small patch of coal, about 14 inches in thickness at its inner end, had been met with at the roof of the drift. This very small accumulation of fire-damp might have been removed by bratticing, and I am of opinion, that fire-damp at this place had been ignited by the firing of a shot at the face of the place, but as the size of the hollow at the roof and the quantity of fire-damp it would contain was so small, I should not have anticipated any person being injured by its ignition at a shot unless there had been a larger quantity of it than there was when I examined the place; and I think it quite possible that additional fire-damp may have been given off at the face by the firing of the first of the two shots, and thus have added to the force of the explosion of fire-damp, and enabled it to produce the fatal and other effects that resulted from it.

I observed that the brattice was further from the face than I approved of its being at the time of my examination, the statement of the agents being, that the firing of shots destroyed it when kept closer to the face.

Robert Davison, the shot firer, was considered to be a trustworthy man, and had previously had a similar charge entrusted to him, and it would seem to be strange that he should not have detected the existence of fire-damp before lighting the shot, had it really existed to the extent necessary to produce the results that ensued, which is a further reason for suspecting that a sudden discharge of fire-damp had resulted from the explosion of the first of the two shots, and added to the force of any that might be lodging in the recess in the roof of the place, as already mentioned.

Mrs. Clark, the widow of one of the persons who lost their lives by the explosion, stated that her deceased husband had told her, on the evening of the day before the explosion, that the place had "fired" on that day; and William Maitland, the father of another of the persons whose lives were lost, said, that his son also told him that the place had "fired" on the day before the explosion, and that his son then went to Barnes, the overman, who told him (his father stated) to be as careful as possible, and that he, the father, had also spoken to Barnes on the subject on the morning of the day on which the fatal explosion occurred. John Barnes, the overman, however, on being examined upon oath at the coroner's inquest stated, that none of the men in the Harvey Seam had ever complained to him that they were afraid, and that he had not had any complaints about want of air, and that he had never heard of any explosion from firing a shot in the drifts. This witness stated, that he was in the Harvey Seam two days before the explosion, and then found that gas was being given off from the coal at the top of the drift, and that a small accumulation of it exploded within his lamp gauze about four feet from the face; that he waited till two shots were fired and was not the least afraid of an explosion, nor did the men say that they were afraid. He considered that the ventilation of the place was in accordance with the First General Rule of the Mines Inspection Act. He stated that the place was free from gas at the time when the two shots were fired while he was there, and that the brattice was then about five yards from the face, and that he had found that distance to be near enough up to that time. He also stated, that Maitland and Morrow, the two men who worked in the place where the explosion had occurred, had frequently applied to him for a lamp key to enable them to fire their own shots, the last time of their applying being only three or four days before the explosion took place, but he refused to let them have one.

Robert Baxter, a hewer who had worked in the Harvey Seam along with Maitland (one of the deceased), said, that gas had been given off in the place since a hitch was reached four or five days before the explosion, and that if there was any present when the deputy came to fire a shot it was "wafted" out before the shot was fired.

This statement as to wafting gas out was heard with apparent surprise by Mr. Bigland, the viewer, who stated, that he was not aware that such a practice had been followed. Mr. Bigland, the viewer of the colliery, produced a plan of the small extent of workings in the Harvey Seam, and stated that after having driven a drift 50 yards in length, to connect the two shafts, about June 1865, nothing more was done in that seam until the 14th February 1866, when the drifts were commenced at the new pit; he pointed out on the plan the places where Davison and Clark were found after the explosion. He stated that John Lonsdale, a shot firer, attended from 6 a.m. till 6 p.m.; that there were workmen in the drift over the whole 24 hours, and that R. Hall was in charge at nights. He stated, that the instructions to the shot firers were that they were to go in with locked safety lamps, and carefully examine the face of the place beyond the inner end of the brattice, and that if they found any indications of fire-damp they were not to fire any shots till they had put up more brattice and the place had been cleared of gas in that manner. He had never heard of them "wafting" the gas out till he heard of it at the inquest, and felt surprised at the statement. He knew of the men sometimes firing two shots at once, and found no fault with it. If the shot firer found no gas, his instructions were to unlock his lamp and fire the shot with a match; they did not use a wire for firing but took off the top of the lamp for the purpose. The drift was six feet wide, and there were three shifts of men in it in the course of the 24 hours. Between 2 p.m. and 6 a.m., Robert Davison was appointed to come out of his place and fire the shots for the men, and that his appointment as shot firer was with his (Mr. Bigland's) sanction.

Witness stated, that he was in the Harvey Seam on the Tuesday morning before the explosion, and met Morrow and Maitland coming out from their work, when they told him, it being before the proper time, that they were tired, but made no complaint to him as to the state of their working place. The thickness of the coal at the top of the drift on the Tuesday was six inches; but it had increased in thickness on driving forwards, so that at the time of the explosion it was 14 inches thick near the face of the drifts. On Tuesday the brattice was four or five yards from the face, and he thought this as near the face as firing shots would permit of, and there were two loose leaves of brattice ready to be put in if required; he had not observed any gas to be given off from the stone, it all came from the coal at the top of the drift.

Witness stated his opinion as to the cause of the explosion to be that an accumulation of gas had taken place at the roof about a yard from the face of the drift, where the 14-inch coal terminated, and that the first shot had not caused the explosion, but that the second one had done so. He was of opinion that Davison, the shot firer, had neglected to examine the place.

At the inquest I concurred with Mr. Bigland as to the probable source of the fire-damp, but subsequent inquiries and reflection on the case led me to think it possible that the first of the two shots, which had been lighted at the same time, had liberated a sudden discharge of fire-damp which had been ignited by the second shot.

If this supposition is not correct, it would appear that the deceased shot firer had neglected to make a proper examination of the place before lighting the shots, or had erred in his judgment.

The jury, after deliberation, returned a verdict of accidental death, accompanied by a recommendation that more care should be exercised to keep the brattice closer up to the face in future.

The statements of the survivors of the explosion, I am informed, agreed to the effect that the first shot caused no explosion, and that it accompanied or followed the going off of the second shot immediately afterwards.

Robert Hall, a deputy overman in the Harvey Seam, in his evidence at the inquest, stated, that he entered upon his duties at six o'clock on the evening of the day before the explosion, and that about half-past one o'clock on the morning of the explosion he had examined the face of the place with his safety lamp, and also at the brow, about four feet back from the face, and then found no gas in the place, and he made a written report to the overman, as usual, that morning.

Hall's report was produced; but nothing was said in it as to the presence or apprehension of fire-damp.

My inquiries lead me to think it quite possible, that the idea of the place having fired on the day before the explosion may have arisen from the fact of an overcharged sumping shot having blown out the lights in its neighbourhood, as Lonsdale, the shot firer, states that previous to his lighting the shot there was no gas at the face of the place, nor yet in the hole in the roof near the end of the brattice.

Although the ventilation appears to have been sufficient, under ordinary circumstances, had the brattice been kept sufficiently close to the face, it appears from the evidence that a small quantity of fire-damp was occasionally observed in the recess in the roof, between the face of the place and the end of the brattice, but being small in quantity, it was dashed out, and rendered inexplosive, if present, when shots were to be fired.

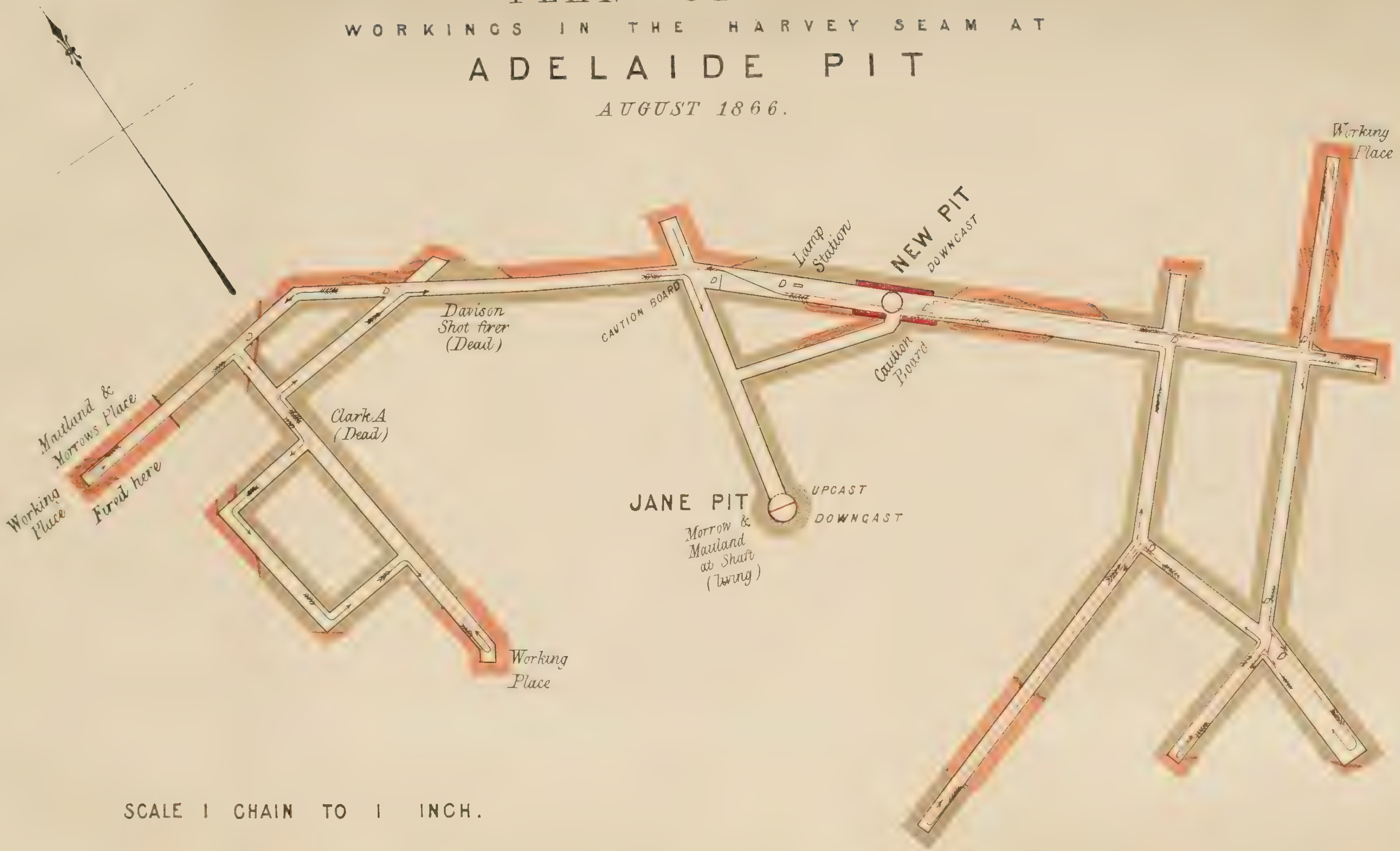
This ought, I consider, to have been prevented by bratticing, yet I have been a witness in a case where a small accumulation of gas was observed at the roof of a working place by one of my colleagues and myself, and a prosecution was instituted to recover a penalty for a breach of the first general rule of the Mines Inspection Act, before a very full bench of magistrates, and after a long hearing the case was dismissed, the magistrates appearing to consider that it was not a breach of the rule.

Although the practice of firing shots where safety-lamps are used is likely to be attended with more or less danger, as in this case, yet to prohibit it by law would, I fear, in some cases lead to places being worked with naked lights instead of safety-lamps, and so cause another and in many cases a greater danger to be encountered, while it would seriously enhance the cost of working coal in a great many instances.

A plan of the workings *is annexed.*

The other fatal explosion of fire-damp which took place in this district during the past year occurred in the Busty Bank or Harvey Seam at Pelton Colliery, where that seam of coal had recently been sunk to, and had only been worked to, a very limited extent until shortly before the explosion. This seam of coal, where it has been worked for a long time at other collieries in the western part of the district, is of a very harmless

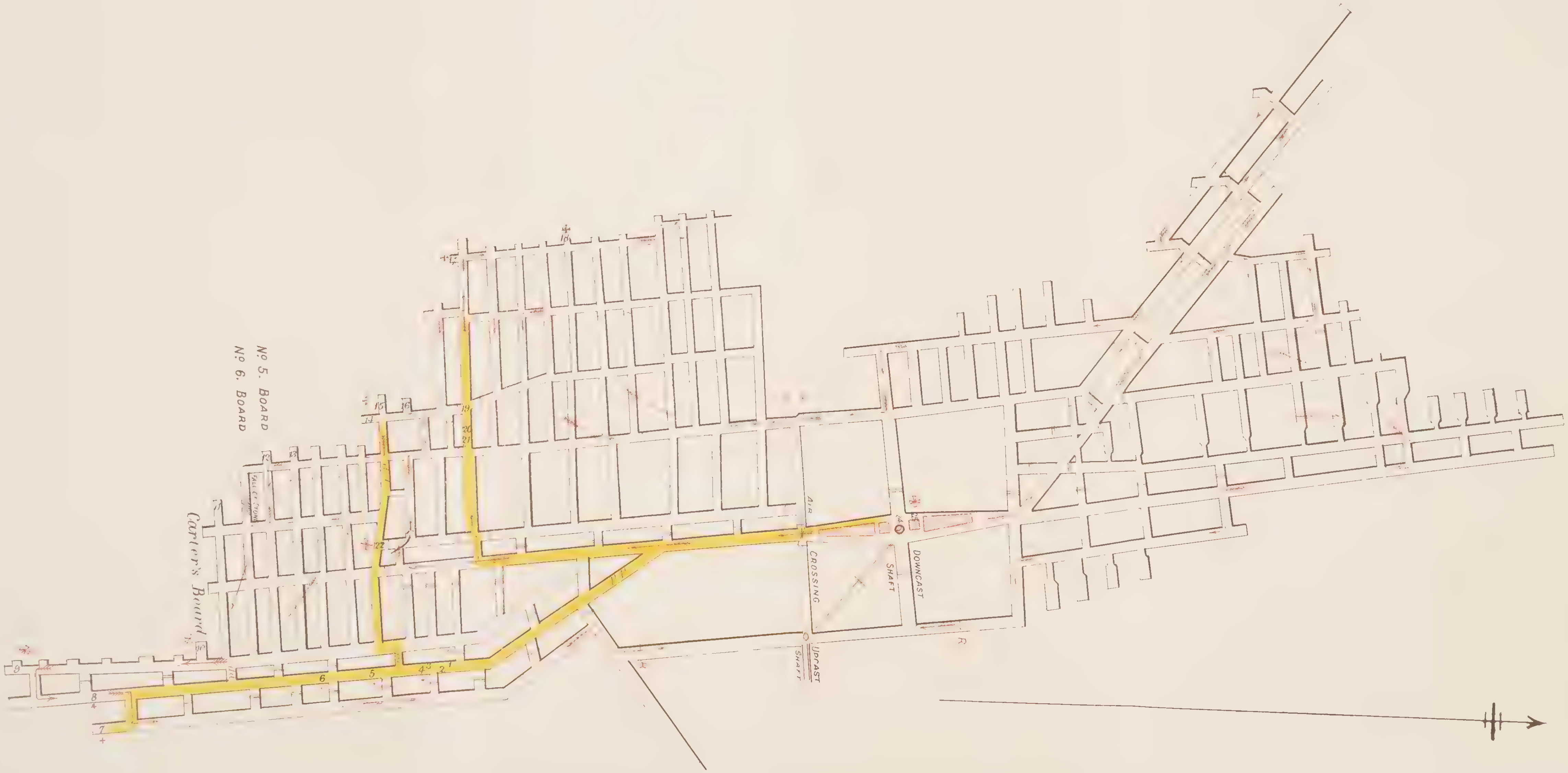
PLAN OF THE
WORKINGS IN THE HARVEY SEAM AT
ADELAIDE PIT
AUGUST 1866.


Working Place
Lamp Station
NEW PIT
DOWNCAST
CAUTION BOARD
Caution Board
Davison Shot firer (Dead)
Clark A (Dead)
Maitland & Morrows Place
Working Place
Fired here
JANE PIT
UPCAST
DOWNCAST
Morrow & Maitland at Shaft (living)
Working Place
D
SCALE 1 CHAIN TO 1 INCH.

To accompany report of J. J. Atkinson.

[To accompany J. J. Atkinson's Report _ See page 10.]

PLAN
OF THE WORKINGS IN THE
BUSTY BANK SEAM OF COAL,
AT THE
Pelton Colliery,
31st October, 1866.

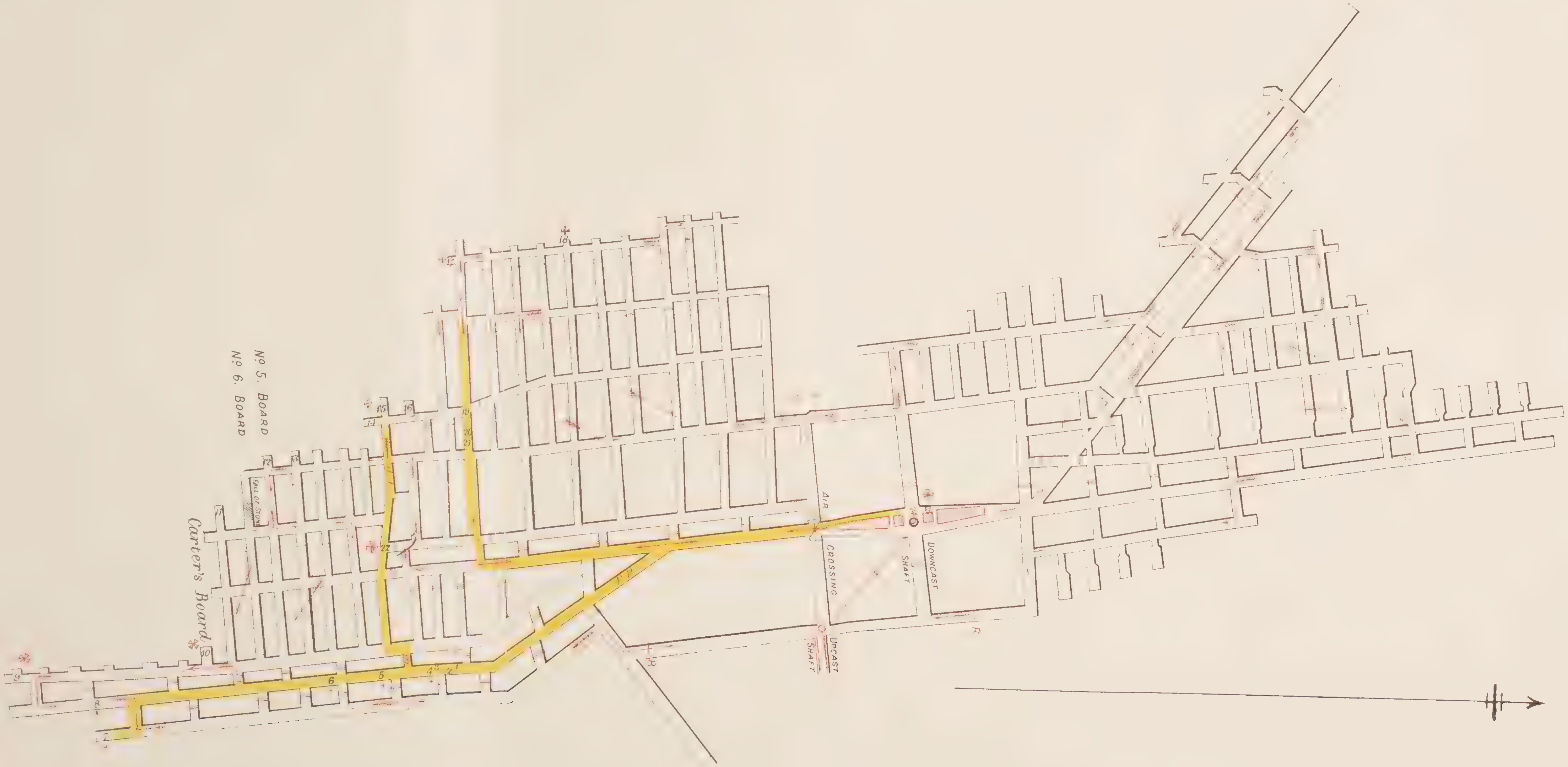

No. 5. Board
No. 6. Board
Carter's Board
Fall of Stone
Air Crossing
Shaft
Downcast
Upcast Shaft
1
2
3
4
5
6
7
8
10
12
13
14
15
16
19
20
21
22
24

THE NUMBERS shew where the bodies were found after the explosion.

SCALE THREE CHAINS TO AN INCH.

PLAN
OF THE WORKINGS IN THE
BUSTY BANK SEAM OF COAL,
AT THE
Pelton Colliery.

31st October, 1866.



No. 5. Board
No. 6. Board
Carter's Board
Fall of Stone
Air Crossing
Downcast Shaft
Upcast Shaft
R
22
19
20
21
18
17
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16
6
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2
1
7
8
9

THE NUMBERS shew where the bodies were found after the explosion.

SCALE THREE CHAINS TO AN INCH.

character, only giving off carbonic acid or stythe, and has, I believe, seldom been known to give off fire-damp, and excepting in a few places, it was considered that very little, if any, fire-damp was yielded by it at Pelton Colliery, yet as being at a distance from any place where the seam had been extensively worked, and as a precautionary measure, it was worked with locked safety-lamps, but shots were allowed to be fired in some of the narrow places, by means of probe wires and touch paper.

The means at command for ventilating the seam at the time of the explosion, I considered as being of a highly satisfactory character, one of the largest of M. Guibal's patent contrifugal fans having been erected at great cost, for the purpose of increasing the previous ventilation of the colliery.

The first witness examined at the inquest was Mr. Armstrong of Wingate Grange, the principal viewer at the Pelton Colliery, who produced and explained a plan of the workings of the mine.

He stated that he first entered as viewer of the Pelton Colliery in 1862, that the Hutton Seam was the only one then worked at the colliery, and that it was ventilated by means of a furnace, and the occasional use of some coke ovens, which afforded just sufficient ventilation to keep the workings clean, the main current of air before division was then 20,520 cubic feet per minute.

As the workings of the Hutton Seam extended in all directions, and the frictional resistance of the air from its additional run was increased, Mr. Amstrong stated, we added another furnace to provide additional ventilation, and the second furnace gave an additional 7,000 cubic feet of air per minute. We then had two working shafts, and the engine shaft as downcasts, and the furnace pit with its two furnaces as an upcast. The depths of these shafts were each about 57 fathoms.

The sinking to the Busty Bank seam of coal by two independent shafts which had no connection, except for ventilation, with the then working pits of the Hutton Seam, was then commenced, and we ventilated the Hutton Seam workings, and the exploring places in the Busty Bank Seam with the two furnaces in the Hutton Seam; we had improved the Hutton Seam air courses, and in November 1864, we were enabled to get in the Hutton Seam a principal ventilating current of 21,450 cubic feet of air per minute, and in the Busty Seam a current of 11,000 cubic feet per minute. We found, however, that we could not efficiently ventilate both the Hutton and the Busty seams, without some additional ventilating power.

I have seen several fans in different parts of the kingdom, and had examined two at work in this district, one at Elswick and another at Tursdale Collieries, and as we only obtained 7,000 cubic feet of air per minute from the addition of the second furnace, it was useless to add another furnace, and I conferred with our inspector, Mr. Atkinson, as to the most efficient ventilating power for the case. We agreed that the fan patented by M. Guibal, of Belgium, was the most efficient, and an agreement was made with M. Guibal for the erection of this fan. One condition of the agreement was, that it should be of such power as to extract 100,000 cubic feet of air through the workings of our colliery per minute, when subjected to a frictional resistance equivalent to three inches of water, or in other words the fan was to extract 100,000 cubic feet of air per minute, through the pit, when subjected to an aggregate friction represented by a column of water 3 inches high, or 15·6 lbs. per square foot.

The fan erected was 30 feet in diameter, and 10 feet in breadth, and it was started on the 21st October 1865, little more than a year ago. Before M. Guibal was entitled to his money for it, the fan had to be tested, to see whether the condition of 100,000 cubic feet of air per minute through the workings was performed or not (a detailed register of the experiments was handed in).

This test was made, and we found that by keeping the motion of the fan as nearly uniform as possible, at 64 revolutions per minute, we obtained with a water gauge of 2½ inches 98,488 cubic feet of air per minute, as an average main ventilating current, and with water gauges varying from 2½ to 3 inches, we obtained from 91,000 cubic feet, as a minimum, to 106,000 cubic feet as a maximum, per minute.

About the same time, and before finally adopting the fan as the ventilating power for both seams, some experiments were made with the two furnaces, and it was found that with a water gauge of $\frac{9}{10}$ths of an inch, which was about the highest that the furnaces could produce, the main current in the Hutton Seam was only about 31,720 cubic feet per minute, and that when the small ventilation of the Busty Bank seam was shut off, and the two furnaces limited to the Hutton Seam only, not more than 35,245 cubic feet per minute as a maximum current could be exhausted.

We then adopted the fan to work both the Hutton and Busty pits. This was in October 1865. The fact is that from the depth and nature of the workings, the ventilating column here is so small, that the fan is peculiarly applicable. In the Busty Seam there is one downcast shaft 10½ feet in diameter, and one upcast. After the fan was applied as the chief ventilating power of the colliery, we ascertained that we got 44,255 cubic feet of air per minute into the Hutton Seam, and 21,700 cubic feet into the Busty; our last measurement on the 2nd October last showed 41,432, sent into the Hutton Seam, and 23,290 into the Busty.

We had regulators for the different air splits in the Busty Seam, and by enlarging or contracting these, we augmented or dimished our ventilating currents in the several inby ways, and as the Busty Bank Seam ways extended we from time to time added to their air currents, having the most perfect control over the quantity by these regulators.

The workings in the Busty Bank Seam are divided into two districts, the north and the south. The workings of the latter are comprised within an area of seven acres, whilst the north does not exceed four acres.

The fan has been constantly at work from the 1st day of its erection to the present moment. We stop it on Sunday mornings for a short time to determine that all the fittings are complete, we oil the machinery belonging to it three or four times every day, never stopping its motion, but only reducing its velocity. No naked lights were permitted beyond the bottom of the pit, and in neither district were there are any other lights than Davy lamps.

The Davy lamps are all locked by the deputies at the bottom of the pit, and such is the tender character of the seam that except in the winning headways, which are exploring places, and in the walls, there is no reason to fire shots.

The deputies have to inspect the places before the shots are fired, and when the place is found quite clear, the shot is fired by a hot wire and touch paper. The seam is quite a new seam in this part of the country, and is quite unknown to Pelton. It might have been a very gassy seam, or quite a simple one, as it is; but we took these precautions until the men got acquainted with it. The men have copies of the rules, and can have them renewed on application. The deputies examine the men's lamps in the morning. After they have gone through the workings they come back to their cabin and lock the lamps, and send the men to work. We have two fore-shift deputies, and two back-shift deputies, and the pit is travelled by the back overman every morning, and the head overman at other times. I was last in this pit about five weeks ago. I examined the face of the workings in the south winning headways, and I found them all quite clean. The men were working with locked lamps; but there were no indications of gas.

I afterwards examined the north cross-cut drifts, and they were perfectly clean, and I afterwards went through some of the working boards, and found every thing quite clean and comfortable.

Beyond the slight discharge which always accompanies the exploring places of every colliery where gas is discharged, and which is very trivial in this case, I never saw the slightest indications upon my lamp of any gas whatever.

The exploring places occasionally give off small quantities of gas, and they are doing so at present. On Thursday morning, the day after the accident, I examined the south winning headways, and notwithstanding that the brattices were all destroyed, and that the air-current was imperfect from the leakage of the temporary stoppings, yet only in the westernmost of the three headways could I detect any gas upon my lamp, and that was up in the corner of the place. I examined the back pillars behind the fall and around the face of the south district workings, and although in the working boards the air-current was dead, the brattice being all blown down, I failed to detect any indication of gas.

On the morning of the explosion the wall in the fifth board was holed into the next (or sixth) board by the hewer, and a passage made through. There were several falls of stone about the time of the explosion. I have examined them since but found no gas. The ventilating current for working the south way is about 14,000 cubic feet a minute, and the current for the north way is about 9,140. In passing up the north-west district we passed through two "rise hitches," and had considerable difficulty in getting past them from the gas, and the men had once or twice to be taken out in consequence. We are past them now, however, and there is no difficulty. I have never had the slightest complaint from any one in the pit about the existence of gas in it. I have not had the slightest complaint from any one having attempted to unlock their lamps, or having used pipes or matches; but two men were fined 10*s*. each in July last for puncturing their lamps with their picks. These men did not intend to break the gauze, but one of the rules is that no lamp shall be hung within two feet of the swing of the pick, and upon that rule they were fined. I went down the pit the morning after the explosion with a view of discovering whether I could offer any reliable reason for the origin of the explosion. I went in company with Mr. Southern and Mr. Shield into the face of the south headways. There was no gas there, and with the exception of a small quantity exuding from the corner, there was none in the next place.

We found the evidences of fire more intense in the three south headways than in any other portion of the pit. The fire had divided, and one portion had passed to the west workings, and the other had gone on to the shaft, carrying away the stoppings, doors, and regulators, and passed up both shafts together. The portion of the fire which went west ran along the headways to the place where the body of the boy Bateman was found, and exhausted itself among the workings. My belief is that the quantity of gas which has been discharged has been small, and the area of fire has been very small. The seam is an exceedingly dry one, and there is much dusty small coal lying throughout the workings. The explosion would, from the heat generated, expand the air to a very considerable volume, and the air seeking relief at a very high velocity in every direction would catch up these small particles of coal, set fire to them, and drive them through the workings in a dense cloud, generating carbonic acid all the way, and thus, with the after-damp, the immediate result of the explosion, do nearly all the mischief.

The men died principally from the poisonous air. I never saw such a quantity of charred small coals cast about at any explosion. As to the cause of the occurrence it has been suggested that gas had accumulated behind the old fall in the sixth board in the south way, and that the hole made on the morning of the explosion into this board had admitted the air current, which would, if there was this accumulation of fire-damp beyond the fall in the sixth board, carry the gas down upon the south headways; but still there was the difficulty that there was no naked light to explode it. All the lamps in use in the south district have been recovered; every lamp is locked. (The lamps were produced and examined.)

Some of the lamps have been injured by the explosion, but the great bulk of them are perfect, and these we have exposed to a test in our small test gasometer, and they have not passed the flame.

And suggestions have been made as to the falls at the ends of the fourth and sixth boards having some connection with the cause of the explosion. It is impossible to say whether the falls at these board ends occurred before or after the explosion. The board ends were propped before the exlosion, and they are now fallen. And whether the falls took place before or after the explosion it is impossible to say. If the falls took place before the explosion the solution would be that they extended 33 feet up to a small seam of coal which was passed through in sinking the shafts to the Busty Bank seam, and which, in sinking, gave off a considerable quantity of gas; and one or both of these falls may have liberated a sudden discharge of gas, and from this source the gas may have been obtained which resulted in the explosion. I have examined the falls with great care, and I can see no tops to them at all, and it is very likely that they have run up to the seam above. The discharge of gas here would be carried down with the current of air, and might get exploded either by a lamp not locked by the deputy—which is hardly possible—or fire at a punctured or injured lamp. I do not think a lighted pipe for smoking would cause the explosion. I do not think any one carried lucifer matches into the pit; and there is not the smallest evidence of a shot having been fired that morning.

Mr. Armstrong went on to state that he was not aware of the practice of the shots having to be fired in the presence of the deputies having been repeatedly neglected. He stated that the ventilating fan was revolving before the explosion, at the time it happened, and since.

He stated that he had examined every working place and had not the slightest hesitation in stating that not one shot had been fired on the morning of the explosion. It was, he stated, at the time of the occurrence, too early in the morning for the firing of shots, as the men had not had time to prepare their places for blasting.

Mr. Armstrong stated that any stoppage of the fan was not likely to cause any accumulation of gas as its speed was only lessened occasionally for oiling, and on the Sunday mornings, when it is stopped for a short time to see that all the fittings are complete.

In reply to a question Mr. Armstrong stated, that the fan was worked at a less speed than it was capable of, because there was no apparent necessity for working it at any greater rate, there being what he thought a large margin of ventilation in hand; 52 or 53 revolutions per minute he considered were amply sufficient, as they had previously got 30,000 cubic feet of air per minute from the old furnaces, and the fan gave them more than twice that quantity.

Edward Lowes, deputy overman, said: I had charge of the shift working in the south side of the Busty Seam before the pit exploded. I have been a deputy 12 years. On the shift before the explosion the pit was all bratticed up to within two or three yards of the face. They usually brattice up as near as they can, allowing room for the men to work. I was up the south headways last about 2 o'clock on the Tuesday afternoon. I found no gas in the pit on that day. I was at the old fall in No. 6 board about 3 o'clock, and found no gas there. We went all round the pit and found nothing. I carefully examined the back pillars on the occasion referred to; in fact the pit is examined every day. I never found the men with matches or smoking. When shots are fired we examine the place first, and then the men fire the shots; none are ever fired without our knowledge; we are always close at hand. They are fired by means of a piece of wire made red hot, by which a piece of touch-paper is lighted. I have examined the pit thoroughly since the explosion, and cannot say where the gas came from. Supposing an escape of gas had occurred I can give no idea how it caught fire. The touch-paper does not blaze. I make it myself. I can give no idea where the explosion took place. I have never seen the pit fire from a shot. I have heard a lad say that he had seen it fire. It was too early for a shot to be fired that morning; had it been two hours later one would likely have been fired. I am positively certain that no shots were fired that morning.

John Nichol, hewer, deposed as follows: I was working at the west headway on the south side of the Busty Seam on the day before the explosion. I left about 4 o'clock in the afternoon. There was gas in the place then, but not a great quantity. There was more, however, than on the days previous; on the west side of the place the gas took the lamp. I had my lamp about two yards from the face when the gas took. It "tailed up," and I immediately lowered the lamp. I had not seen gas in the headways before. I did not think the gas more dangerous than other places I had been in, in the same pit. I know that when gas is observed a hewer or shifter should leave his place and tell the deputy; but as it was not worse than usual I did not do so. The lamp was about two feet from the roof; the seam was "bleeding" on the west side. The air was pretty good. In general we fire two shots in a shift, sometimes only one. We fire them ourselves. Every man but one had a wire to his lamp for this use, and we made our touch-paper ourselves. The deputy never examined the place where I was before the shots were fired. The deputy in my place was Peter King. After I saw the gas I fired two shots; but the gas did not fire at them. It was about half past twelve when the lamp fired; and it was about half past three when I fired the last shot. It "lighted up" on one occasion on the west side when I fired a top shot; it was "bleeding," and the flame was about the size of a common saucer. We had been that much used to working among it that we did not mind it. I can give no opinion as to the cause of the explosion, and I cannot tell how the gas would be fired. I think the pit had fired at the west headways about the place where I had been working. I have never seen any matches used, or any man smoking. I complained about the brattice six or seven weeks ago, and the place was put right.

By the Coroner.—We have plenty of air generally.

By a Juryman.—The place where I was would have been better if it had been bratticed further up.

Wilkinson Morgan, hewer, said: I worked in the far south board next the headways, "Carter's board," in the south side of Pelton Fell pit the day before she exploded. I fired my own shots. They were fired with wire and touch-paper. I got my wire and touch-paper from the lamp-keeper. I have a copy of the rules. I have never had matches in the pit. I have been down to the seam since the explosion, and there were no appearances of shots fired on the morning of the accident. I cannot tell where the gas came from. I have sent for the deputies when I wanted them, and they have always come. I make touch-paper myself.

David Aynsley, hewer, said: I worked in the Busty Seam about three or four weeks ago, and there I saw a good deal of gas in the south headways. We told the deputy, John Grey, and he warned us to keep our lamps down "as she (the place) was very nasty." Had the place been better bratticed I believe there would not have been so much gas. I fired my own shots. We were at full liberty to do so whenever we liked. I never asked a deputy to come when I was going to fire a shot. We get our wire from the lampman. About three or four week ago, a man working with me told me he had been very much frightened that morning. I have seen the gas standing thirty yards back.

Robert Howe, hewer, said he worked in the Busty Seam about four months ago, and when about to fire a shot, sent for the deputies Peter King and Thomas Batey, and it was three hours before they came. He told them the pit was in a bad state. He did not ask them when they got his message. There was gas in the tramway. The brattice was well up. The deputies said there was a canvas down.

Thomas Mallens, hewer, deposed: I worked in the Busty Seam about five months ago. I saw gas on the top of a hitch when she was well bratticed up. This was on the north side.

Peter King, deputy overman, deposed: I have been a deputy 11 years. I left the south side at 5 in the afternoon of the 30th October. There was then no gas in the pit, nor had I heard any complaints from the men at any time about the gas. I do not allow any shots to be fired at any time without first examining the place. I know the men have wires, but I do not think they fire shots without giving us notice. I cannot say whether Aynsley ever sent for me before firing shots. Wilkinson Morgan never sent for me. I do not remember Aynsley saying there was gas 30 yards back; I never saw gas four yards back. The other deputies never told me of such a thing. They would have told me had they known; I always cautioned the men to keep their lamps down.

Thomas Batey, deputy overman, said: I was in the south side of the Busty Seam four months before the explosion; the men never complained to me about the gas. I never saw gas standing four yards back, nor heard of it. Aynsley and Howe were working there. I have examined all places when a shot was about to be fired. I have cautioned a man not to fire a shot unless I was there. I have a copy of the rules. I believe it has been a practice among the men to fire shots without giving notice, and I have cautioned them and complained to the other deputies. I have only found one man fire a shot without giving notice.

The Coroner said it was a pity these complaints were not made immediately the rules were broken. If the rules were strictly adhered to, much loss of life might be saved.

Joseph Batey, back overman, who deposed as follows: I was in the pit the day before she fired, and left at 10 o'clock in the forenoon. The pit was then all right. I cannot form any idea where the gas came from. He had not heard any complaints about gas, either five or six months ago, or at any other time. If a complaint is made, the deputy must remedy the fault himself or inform the overman. I have examined the old fall since the explosion, but I saw no difference in it. The fall at the board end was not down on the morning of the explosion. I climbed up into the dome above the old fall because the glass was rather low, but I found no gas there. I cannot give any idea of what had fired the gas when it had come. I have never heard of matches or pipes being lit down the pit. I have travelled the back pillars in the south district regularly, and have found no gas. On the day before the explosion, the current of air in the south headways was in its ordinary state. I had no complaints about five months back that the pit was in a bad condition. As a rule, the deputies ought to be present when the shots are fired. I was not aware until to-day that the men fired the shots themselves. Some of the men have a wire attached to their lamps. I have cautioned the men not to fire shots without the deputies. We did not take the wires for firing shots from the men. I have always reported to the under-viewer the state of the pit, as required by the rules. On the day before the explosion I visited every place in the south side of the Busty. I remember Aynsley working in the Busty. He never complained to me. I never saw 30 yards of gas in the seam, or any other quantity; he must have been mistaken. Aynsley never reported to me that there was gas in the pit, nor did any of the deputies report such a thing to me. I found no trace of a shot having been fired in the Busty Seam on the morning of the explosion. No one ever reported to me that the gas fired in the face of the headways at the shots. I have never seen a blower the whole time I have been in the pit. I would not be in the least frightened to travel the seam with a naked light. In a pit which makes any gas at all we expect to find some in the exploring places.

A juryman: You would not recommend anyone to go through the pit with a naked light?

Witness: Certainly not; for ignorant men might go about so as to make it dangerous.

Mr. James Ritson, under-viewer or principal overman, deposed as follows: I was down the Busty Seam the day before the explosion. The pit was in a good state, but I increased the current of air. I have had no complaints about gas in the pit. I have seen a trifling amount of gas on the face of the seam, but no more. I was not aware of the men firing shots by themselves, but I knew they took wires in with them. I expected the deputies would see that the place was in a safe state.

The Coroner: If they carried wires with them, do not you think they were likely to fire the shots without the deputies knowing?

Witness: Their common sense ought to have told them not. The deputies are responsible for the shots. In reply to the question, "Had the deputies distinct orders that the men were not to fire the shots without they examined the place or were present?"

Witness said they had. I do not see the shots fired. The back-overman, previous to the explosion, reported to me that the Busty Seam was all right. The report is made every night. No gas in the space behind, the back pillars, has been reported to me at any time. I have no idea where the gas which exploded has come from. The only way I can account for it is a sudden escape of gas from one of the falls at the board ends, the fallen parts are both black and they look as if they had fallen before the explosion. I have no idea how the gas became ignited. I found pipes in the pockets of some and tobacco in the pockets of others, but I would not argue from that. The lamps were, with the exception of two, in the places where they were in use by the men, and none of them had been tampered with. There had been no shots fired. I put 2,000 feet per minute extra air in the pit on Tuesday, and the deputies said they never found the pit in better condition.

I never heard a word from Aynsley about the gas being two yards from the face five or six months ago. My orders to the deputies were never to allow a man to work with a lamp where there was gas, and if a place could not be found for him, to send him home and I would pay him his day's wages.

William Jackson said: I have charge of the Busty engine, and when on the night-shift I attend to the fan engine. On the night of Tuesday, 30th October, nothing whatever took place to attract attention until the explosion. The throttle valve had never been interfered with. Seven boilers are connected with the engine and fan; they are fired with patent fires and a steady supply of steam kept up. I have a boiler-minder and a fireman. Neither of these men had been asleep during the night. The fires were kept properly up, and the pressure of steam was never less than 30 lbs. I looked at the gauge many times during the night. Our ordinary working pressure is 40 lbs., and she was never slack. I had not charge of the fan when the explosion occurred; Milner Lockey taking charge of it at 5 o'clock. When I oil the engine the speed has to be slackened; I can oil the machine in two minutes. Between 5 o'clock and the time of the explosion there was no difference in the working of the engine. Upon my oath I am perfectly satisfied that the fan was not slackened.

John Smith, stone-miner in the Busty Seam, said: When we went down between Monday night and Tuesday morning I heard the deputy, John Grey, caution a man named Taylor. He said if he wished to hole his place he must hold his lamp back from the place (that was between No. 5 and No. 6 board). I asked him if there was any gas in the place, as I did not know any one else was going to fire shots there but myself, and he said it was "very bad behind;" this took place at the bottom of the shaft when the lamps were being looked at, and a man named Edward Beaney was present, also a man named Douglas. It was about 2 o'clock on Tuesday morning. The man Grey cautioned was going to work in the wall near the fall. He understood him to mean that the fallen board was bad. He had been in the board since the explosion, but could see nothing. Grey was a careful man. He could not get to the high end of the fall.

George Douglas, hewer, said: I was present when Grey cautioned Taylor about the place he was going to hole into. He said, "If you hole the wall you will have to shift your lamp back." I then went away and heard no more.

Mr. Samuel Bailey Coxon, viewer at Usworth, Pensher Felling, Tyne Main, and other collieries, said: I have been down the pit. I knew nothing about it before. It is a very difficult matter to say where the gas has come from. I went round the workings five or six hours after the explosion, and was astonished to find that when the crossings and stoppings had been blown out, yet by a temporary canvas brattice and stoppings got in in that short period, that the workings were, comparatively speaking, so free from gas. I looked particularly at the faces of those south headways, and with the exception of that place, I found no accumulation in the boards. The gas "tailed" a little on the lamp at the south headways. I am not quite sure that under the circumstances I would have liked to have gone about with a naked light, but when all was right I would have done so. I examined all the indications of the explosion and came to the conclusion that it took place in the westernmost south headways. There was no indication of a blower, and I think the gas must have come from a fallen board. As there was a good deal of falls about there, it is quite possible that a fall might have liberated a sudden discharge of gas; I have known such things. Wherever the gas came from it would be swept down upon the man working in front. The only supposition I can give for the ignition of the gas is that the man who was working there, Richardson, had turned round and found his lamp on fire; he had taken it up so hurriedly and passed it so rapidly through the surrounding explosive atmosphere as to communicate the flame through the meshes of the gauze to the gas surrounding.

Mr. Ritson: Richardson's lamp was found near the face of the board where he had been sitting getting his "bait." There was a prop lying upon it.

Witness: It would have to be moving at a high speed to make the gas fire at the lamp, but that is the only opinion I can give. I have been through the pit since, and find it quite free from gas.

Mr. Thomas Robson said: I am viewer at Lumley and Harraton collieries. I have heard Mr. Coxon's evidence, and agree with him as to where the gas exploded; but I am of opinion that the lamp belonging to Richardson was found too near the face to have ignited the gas, it had not been rapidly carried a sufficient distance. I have no idea of how the explosion was caused. I have not seen sufficient of the fan to give an opinion respecting it. I have seen nothing against it.

By a juryman.—I saw no indications of a shot having been fired that morning.

George William Southern said: I agree with the other witness that the gas had come from a fallen board in the westernmost of the south headways, and come away on the air current.

By a Juryman.—I do not think the lamp had rebounded. I know a very great heat is required to make the heat pass the gauze. I am perfectly well satisfied with the operation of the fan.

Mr. Peele, of Springwell, expressed similar opinions.

I addressed some remarks to the jury, and said that I believed that the gas had come away from the board into which the wall had been holed, or from some fall which had taken place shortly before the occurrence, and that I did not agree with the idea suggested by Mr. Coxon, that the light had passed the meshes of the safety-lamp.* I had studied all about the possible ways in which the gas had been ignited, and was at a loss to account for it. The provision for ventilation, in my opinion, was first-rate, and the fan worked satisfactorily; and I approved of the introduction of the fan for the ventilation of the pit. The Coroner briefly summed up, and the jury, after an absence of about a quarter of an hour, brought in a verdict that "Jonathan Maddison and others did die on the 31st October 1866 from an explosion of gas in the Busty Seam of Pelton Colliery, but cause of the explosion we have no evidence to show. We are also of opinion that negligence has been manifested by the officials down the pit in not enforcing the rules, and also on the part of the men in not carrying them out." Mr. Armstrong, in reference to the opinion appended by the jury to the verdict, said it was not shown in evidence that more than one rule—that with regard to the firing of the shots—had been broken, and the jury should specify this, and no other. The jury adhered to their verdict.

The means established for the ventilation of Pelton Colliery at the time of the explosion were, in my opinion, more than ample for its ordinary requirements, and could at any time have been very much increased by working the fan at an increased speed, had it been deemed necessary to do so.

There was evidence to the effect that the fan was being worked at its ordinary speed at the time of the explosion, and hence it may be inferred that the usual amount of air was in circulation at the time of the accident, and, if so, I am of opinion that there was an unusual amount of fire-damp liberated from confinement in some part of the mine, or given off as a sudden discharge before the occurrence, and which led to it.

There was evidence to show that fire-damp had been occasionally observed in the faces of some of the working places, but it appears to have been small in quantity, and probably might have been prevented by more attention to bratticing closer to the faces of the places.

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* *Experiments made by a Committee of the Northern Institute of Mining Engineers, since this Report was written, have proved that an explosive mixture of fire-damp and air becomes ignited and explodes, when the current has a velocity of only 8 feet per second, on being passed over a lighted ordinary Davy lamp, so that it is quite possible that the ignition of the fire-damp was caused in this manner.*

As to the probable source of the fire-damp which exploded, I am strongly of opinion that it had come from one of the two following sources :—

(a.) That there had been an accumulation of fire-damp in the No. 6 board between a fall of stone and the face, and that when the workman had holed the wall out of the adjoining board into this board, the current of air had carried the lodging fire-damp out of it, and through the workings towards the south winning headways, and that it had become ignited in its passage. Or, as an alternative,

(b.) That one or other of the large falls of stone at the board ends mentioned in the evidence had liberated from the superincumbent strata a sudden outburst of fire-damp, which had been sufficient to render the air-current inflammable.

There being no sign of a shot having been fired at the time of the explosion, it appears to be probable that the fire-damp had been ignited at an imperfect safety-lamp, or by some person improperly having an exposed light.*

According to the evidence, the deputies appear to have had distinct orders that the workmen were not to fire shots without their (the deputies) previously examining their places, and that notwithstanding this, the workmen had frequently, if not habitually, fired their own shots in the absence of a deputy; and I consider that both the deputies who overlooked this practice, and such of the agents of the colliery as either were, or ought to have been, aware of it, were highly blameable, although, as no signs of a shot having been fired in any part of the mine on the morning of the explosion could be found, and as the hour at which it occurred renders it improbable that any shot had been fired, there appears to be little reason to suppose that the fire-damp had been ignited by the firing of shot.

The fact of the workmen firing their own shots in the absence of a deputy, and of their being allowed to have probe wires, and touch paper in their possession, was calculated to render them less careful in the use of their safety lamps than they otherwise might have been.

Whether the fire-damp which was exploded came from the inner side of the fall of stone in No. 6 board, from the superincumbent strata at the adjoining board ends, or from any other source, I think it was a great oversight or want of care on the part of the deputy to allow the wall to be holed into No. 6 board while the pit was at work, without taking precautions against the chances of fire-damp being lodged in the board beyond the fall of stone, and becoming liberated on the holing of the wall.

The source of the fire-damp is more or less a matter of conjecture and doubt, and the cause of its ignition has not been ascertained even with any satisfactory degree of probability.

Falls of Stone and Coal.

In this inspection district 23 deaths have been caused by falls of stone and coal. The avocations of the persons who have met with their deaths from this class of accidents were as follow :—

Deputy overmen - - -	4
Coal hewers - - - -	10
Shift workmen - - - -	2
Horse and pony drivers - - -	3
Wasteman - - - -	1
Stone workman - - - -	1
Chock drawer - - - -	1
Back overman - - - -	1
	23

The deaths from this class of accidents have been less than they were on the average of the preceding four years, in the proportion of 23 to 28.

I do not think that any of these accidents were attended with such circumstances as to call for special remark here.

A class of workmen called deputies or deputy overmen are employed to attend to the timbering for the support of the roof in the working places of the mines of this district, as well as to the general safety of the work people, and from the nature of their employment they are the greatest sufferers in proportion to their numbers, from this class of accidents.

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* See previous foot note.

Shaft accidents.

John Ferguson, a sinker in a new shaft being sunk at Houghton pit of Newbottle Colliery, belonging to the Earl of Durham, was killed by a pump bursting, a part of which fell down the shaft upon him, in February 1866. There had probably been some strain on the pump due to unequal contraction in cooling at the time of casting.

Patrick Burk, a driver, was killed in the shaft at Ryhope Colliery in February 1866. Some part of his person appears to have projected from the cage and was caught against one of the cross timbers in the shaft.

Joseph Hayes, a coal hewer, was killed in the shaft at South Kelloe Colliery in February 1866. His head appears to have been caught between the cage and a bunting fixed in the shaft, whether from his being seized with a fit or how otherwise appearing to be somewhat doubtful; he was decending the shaft at the time.

George Hunter, a joiner, while engaged in laying the flooring in an engine house in which there was a staple or pit, at Ivestone Winning on the 24th February 1866, was killed by falling down the staple, owing to the edging over of a plank, which appears not to have been nailed down at the time.

Thomas Emmerson, an onsetter, was killed in a shaft at Hetton Colliery on the 13th March, by first being struck by a bolt, supposed to have fallen from some of the gearing at the surface, which caused him to fall from the upper seam, where he was employed, to the bottom of the shaft. It is not known whether his death arose directly from the blow by the bolt, or by the fall in shaft which followed as a consequence.

Benjamin Westbury, a furnace man, was crushed by a cage in the cage-hole at the bottom of the shaft at Ryhope Colliery on the 14th April 1866. He appears to have walked or slipped into the cage-hole by mistake, the pit was going coal work at the time. Several workmen were near him at the time.

William Gill, a plugman, was killed in a shaft at Haswell Colliery on the 29th April 1866, through the giving way of some of the head gearing, and the consequent severance of a rope while a lift was being taken by crabs or capstans. Some pump spears were being raised, and the broken rope appears, in its fall, to have struck Gill, or caused him to fall down the shaft by carrying away with it a portion of the scaffold upon which he and another person were standing at the time, at some distance above the bottom of the shaft. The timber was seen, after the fracture, to be considerably decayed, but the engineer said he had examined it about a fortnight before the accident without detecting it to be in a dangerous state from its outward appearance.

William Ferguson and George Harbottle, two coal-hewers, were killed by a chain falling upon them, from the top of the sixth pit at Lumley Colliery while they were in the cage at the bottom of the shaft ready to ascend, on the 21st July 1866. There was some misunderstanding between the on-setter at the bottom and the banksman at the top of the shaft as to the signals; preparations were being made at the top of the shaft to attach a chain to the shaft-cage in order to lower a small cage down the shaft, intended to be used in a staple in the mine, and the chain accidentally slipped down the shaft, and penetrated the top of the cage at the bottom, in which deceased were sitting, intending to be drawn up the shaft, and caused their deaths. Some degree of blame appeared to attach to the on-setter for allowing the men to get into the cage, and it was imprudent on the part of the banksman to allow of the operations at the surface until after he had got a distinct understanding with the on-setter; and it would have been more safe to have allowed all the workmen to have come to the surface before starting to send the staple-cage down. Precautionary recommendations were made with the view of preventing the occurrence of a similar accident in future.

George Adamson, a sinker, was killed by the falling of a stone upon him in the new shaft being sunk at Houghton pit of Newbottle Colliery on the 28th September 1866.

On the 16th October, John Shannon, a coal-hewer, met with his death through being crushed between the cage and the guide whilst ascending the shaft at Coxhoe Colliery, in October 1866. He and his brother had improperly signalled for themselves to be drawn up the shaft, and he appears not to have got safely into the cage, and so to have been crushed.

On the 6th November, William Richardson, a coal-hewer, was killed by falling into the sump at the bottom of the shaft at South Durham Colliery by walking into it directly he got out of the cage, after descending the shaft. The evidence at the inquest went to show that chains had been provided for the hookers-on to put up, in order to prevent persons walking into the sump, and this they had neglected to do on this occasion. But it also went to show that these chains had not been regularly used, and this was known to be the case by the agents of the colliery.

The jury, in their verdict, reflected upon the agents of the colliery for not seeing the orders as to the use of the chains carried out, and exonerated the on-setters from blame.

Miscellaneous Underground Accideats..

The number of lives lost from this class of accidents has been unusually great during the past year; one of these accidents having caused the loss of the lives of five persons, while riding, contrary to orders, upon a set of laden tubs in an engine plane.

Of the 40 lives lost from accidents coming under this head no less than 34 of them are from crushes by coal tubs upon the underground roads of the mines, the numbers being nearly equal on the roads where horses and ponies are used, and upon the self-acting and engine planes in the principal roads of the mines.

On the 12th January 1866, at Pelton Colliery, a number of youths appear, from the evidence at the inquest, to have got upon a set of laden tubs which were being hauled out by an engine, by means of a rope, to ride out to the shaft after their day's work was over, against an express provision to the contrary, contained in the special rules of the colliery, a special notice of which was hung up on the pit bank.

On their way towards the shaft the train of tubs upon which they were riding was run into by a lot of tubs from a branch way, which had accidently escaped the control of the persons who were engaged to guide them down to the engine plane, and the collision caused the deaths of five of the youths who were at the time riding upon the engine set, besides causing injuries to others.

The temptation for persons to ride upon engine sets is such as to render it very difficult to prevent their doing so.

In evidence in this case it was stated that an empty set of tubs had been tried in which the workpeople were allowed to ride out from their work; but that it had failed to prevent persons from time to time riding on the laden trains, as they would not wait till the empty train was ready, and it had been given up.

There was a man stationed at the part of the engine plane where the youths got upon the train, and he stated that he advised them not to get upon it, and that he had orders not to allow any one to ride upon the laden train; had he tried to prevent them getting on where he was stationed, and where the train went slowly, he thought they would have got upon it at another place.

He had made several persons get off the train to prevent them riding; but they often did ride notwithstanding his trying to prevent them; he said they knew that riding was not allowed, and had the rules on the board upon the pit heap to that effect.

I may remark that it is very difficult indeed to prevail upon workmen and boys to walk long distances underground where it is possible for them to ride, and in some situations it is considered to be quite as safe riding as walking, and in many such cases they are allowed to ride.

Sets of trains of coal tubs drawn at high speeds along the confined passages of mines where there is no daylight, and where people often lose their artificial lights, are naturally very dangerous to life and limb; and the danger is enhanced in many instances by persons trying to get upon and to get off such trains while they are in motion.

To provide separate and distinct roads from engine and inclined planes, for persons to travel in, would in some cases probably tend towards the prevention of loss of life and of personal injuries, but would I think in many old established mines be all but impracticable, and in my opinion would not altogether prevent persons from riding upon trains.

A large proportion of the deaths that have resulted from crushes by tubs have happened to boys employed to drive horses and ponies drawing coal tubs. The natural dangers of pony-putting, as it is called, in the extreme and often low galleries in mines, is followed in this district to a great extent (where the coal measures for the most part have a very slight inclination to the horizon) have been remarked upon in some of my former reports as being very great; and any one conversant with the practice and the situations in which it prevails can scarcely be surprised at the number of deaths which result from it.

The driving of horses in the principal roads of the mine is far from being such a dangerous occupation as pony-putting in the extreme workings.

In one case, at Wingate Grange Colliery, where a boy received such injuries from his horse coming in contact with some fallen timber that they resulted in his death, a verdict of manslaughter was returned against a man whose duty it was to see after the road, and who had been told about the fall before the occurrence; but the grand jury ignored the bill, and the case was not heard.

Two of the deaths classed as miscellaneous underground accidents arose from persons falling down staples or interior shafts in mines; but neither of them present any such features as to require particular notice here; in both cases ordinary care on the part of the sufferers themselves might have prevented the occurrence of the accidents.

In one of these accidents a boy who was employed to guide a rope, in folding upon a drum, was by some means caught by the rope and carried to the drum, and crushed between the rope and the drum.

In another of the accidents classed under this head a boy died from a blow or kick received from a horse; and in another case an injury received from running against a projecting rail appears to have been the cause of death.

Accidents on the Surface at and about the Tops of Shafts.

The deaths from this class of accidents during the past year have been rather less numerous than on the average of the preceding four years.

Eight of the twelve deaths under this head have arisen from crushes, &c., in connection with coal trucks and waggons.

Of the remaining four deaths in this class of accidents, one arose from a fall of erections by which a joiner or carpenter lost his life; a second from the explosion of gas at a refiner at the gas works connected with a colliery; and a third from the sufferer being crushed by a tub used at a coal screening apparatus; the other death was caused by the explosion of a boiler at South Hetton Colliery.

There were two boilers placed alongside of each other, one 32 feet long and 4½ feet in diameter, and the other, which exploded, 30 feet long and 6 feet in diameter. They were cylindrical boilers, and were placed on the west side of the south winding engine. Each boiler had two safety valves; one of the safety valves upon the exploded boiler was 3⅞ inches, and the other 4 inches, in diameter. On the other boiler one safety valve was 4 inches, and the other 2½ inches, in diameter.

The weights upon the levers of the safety valves, if moved to their ends, would have given a load of 45 lbs. per square inch on the boilers; but the working pressure was only 35 lbs. per square inch.

Each of the two boilers was fitted with a common float, and one of Slater's patent alarm whistles. The boilers were connected by a steam-pipe 6 inches in diameter.

The exploded boiler was about 25 years old. The master blacksmith's last weekly report to the mechanical engineer of the colliery was produced, and stated that he had examined the cock-floats and valves, and found them all in working order on the 26th January, and the explosion followed on the 29th.

After the explosion the fire-end of the boiler was found about 20 yards, and the portion above the fire about 60 yards, from the boiler seat; these two parts were estimated to weigh together about 1¾ tons; the principal part of the boiler was found about 300 yards from the boiler seat, and would be about 3 tons in weight. The feed valve of the exploded boiler when found was about half open, the feed valve on the other boiler was shut.

There was no kep clack or valve (to prevent priming) upon the feed apparatus, but the engineer had never heard of the boilers priming into each other. The boiler had been cleaned eight days before the explosion.

There was a steam gauge connected with the boilers. In October 1865 the brickwork was stripped off the boiler, and it was thoroughly examined, and no flaws found.

The feed water was from the sand feeders in the pit, at the bottom of the limestone: it forms a hard scale about ⅛ of an inch thick once a fortnight, when cleaned. The feed pump was 4½ inches in diameter, and had an 18-inch stroke, and made a stroke for each stroke of the engine.

The foreman boiler smith stated that he examined the boiler on the Friday, and on the Sunday before the explosion, and found no leakage.

The boiler had a common flash flue, and no side or wheel flues.

I am of opinion that this boiler exploded at the ordinary working pressure, and while there was an ordinary working quantity of water in it. The cause of the explosion I think was the weakness of a plate, at a longitudinal seam, on the east side, and near the bottom of the boiler. The weakness of the plate had, I consider, been caused by long exposure to the hot air and gases from the fire.

The plate showed no unusual amount of thinning from corrosion, and its deterioration in quality would be difficult to detect by any of the ordinary modes of examining boilers.

There was evidence to the effect that the boiler had been tested by hydraulic pressure up to 69 lbs. per square inch more than a year before the explosion occurred.

This is another case pointing to the desirableness of limiting the time over which boiler plates shall be allowed to be exposed to the hot air and gases from the fires, in reference to which I made some remarks in my last annual report, as well as to the length of time during which boilers should be allowed to be used both at collieries and also in other situations.

This boiler, although about 25 years old, appears to have been out of use for about seven or eight years of that period; but it would probably suffer deterioration to some extent from the weather, while it was out of use.

The foreman boiler smith in this case had 49 boilers under his care, and I consider him to be a well qualified and a very careful man.

There had been some leakage at the seam, where I suppose the first rupture to have taken place about a week before the boiler exploded, and it had been caulked to stop the leak.

I would here remark that I consider that all cylindrical boilers should be built on what is called the "hoop way," as a boiler built in this manner is naturally very much stronger than when built of similar plates longitudinally.

I have received some complaints from workmen during the past year, as to different matters at the collieries where they were employed, and have in each case attended to them.

In my last annual report I mentioned the fact of Mr. E. F. Boyd, of Moor House, near Durham, having been appointed as arbitrator to decide as to whether the practice of firing shots in the long wall workings in the Low Main coal seam at Trindon Grange Colliery was to be continued or not.

The award of Mr. Boyd has since then been received, and is dated March 12th, 1866.

The following is a copy of the award:—

" *Mining Inspection.*

" In the matter of the use or not of gunpowder in the 'Long Wall' working at Trimdon Grange Colliery in the County of Durham.

" To the Right Honourable Sir George Gray, Bart.,
" H. M. Principal Secretary of State for the Home Department.

" Sir,

" In pursuance of my appointment by you to arbitrate on the matter in difference between J. J. Atkinson Esquire, the Inspector of Mines for this district, and Mr. R. F. Matthews, the principal agent or viewer at the aforesaid colliery, viz., as to whether 'the practice of blasting the coal with gunpowder in the Long Wall workings in 'the low main seam at the said colliery is dangerous, and threatens or tends to the bodily 'injury of the workpeople employed.'

" I have carefully examined that part of the colliery where the said practice is employed, and as the question is of some importance, and its decision may tend to influence similar operations in other collieries, I deemed it proper to confer and consult with Mr. John Daglish, mining engineer for Earl Vane, and he likewise has examined, in company with myself, the two districts of the colliery in the low main seam where the 'Long Wall' working is in operation, and where gunpowder is occasionally used, the coal being of so hard a nature as to render it extremely difficult, if not impossible, to work the seam of coal under existing circumstances otherwise than by blasting with gunpowder.

" There was no explosive gas in any of the working places, nor in any part of the adjacent 'goaf' where it might by any possibility be ignited by the operation of 'blasting,' and I am of opinion, from the appearances presented, and accompanying circumstances, that no gas has, at any time prior to the date of our examination, been seen there.

" The quantity of air circulating in the two districts in question is at the present time—

In the 1st district, 4,000 cubic feet per minute,
„ 2d „ 4,000 „ „

passing each in one column down either Long Wall face.

" The working 'headways' are on the level, the juds or wide working places being driven to the rise out of each 'headway,' and kept as near as practicable in one line: the air entering in one column at the highest jud, and sweeping down the working face of each to the lowest; a travelling road is carefully kept open between each jud, and the return air-course from the east is in excellent condition.

"The 'shots' are fired by a suitable and careful man in charge for the purpose at intervals when required, no other person being allowed to use a naked light.

"Under these circumstances and conditions, I am of opinion that it is not unsafe to use gunpowder when required in the juds, premising however that this remark is applicable only to a similar case, in the same seam and under precisely similar circumstances.

"At the same time all possible precaution and watchfulness should be used; the timber of the 'juds' should be drawn only during the night or when the pit is not at work; and in case any gas be at any time observed in or near any of the working faces the use of gunpowder should be at once abandoned.

"I should recommend that a printed regulation regarding the time and mode of firing 'shots' similar to the accompanying form should be given to each person so employed.

"The following is a copy of the printed regulation alluded to:—

"IV. Firing shot regulations.—When it is necessary to use gunpowder to blast the stone or coal in any part of the mine where safety lamps are used, a trustworthy person must be appointed by the under-viewer to do this. He must in all cases be provided with a Davy's safety lamp, and *after carefully trying and finding no indications of gas* will unlock his lamp and fire his shot himself, and immediately after doing this must relock the lamp. The under-viewer must be careful in his selection of anyone to do this, and must impress upon him the necessity of his using every possible care and precaution; he must furnish him with a copy of this regulation, and warn him that the least neglect will be severely punished.

"Also that effective means should be adopted constantly to carry a sufficient current without waste to the highest jud, and thence to the others in succession, in one current direct.

"Also that the system of 'stone gateways' through the 'goaf' (by this principle it being difficult always to keep the pressure off the face through the goaf) be abandoned, and that coal gateways, of the description already partially adopted at the same colliery, be those universally made use of throughout.

"And, lastly, that wherever the roof stone after the withdrawal of the coal and temporarily supporting timber does not fall freely and any extent of unfallen or open 'goaf' remains behind the 'chocks' and timber, then until such 'fall' has satisfactorily taken place that the firing of 'shots' be for the time abandoned.

"I have the honour to subscribe myself, Sir,
"Your obedient Servant,
(Signed) EDWARD F. BOYD.

"At Moor House,
"Near Durham,
"March 12th, 1866."

Shafts in the course of being sunk to comply with the requirements of the Act 25 & 26 Vict. cap. 79.

At Castle Eden Colliery, where the extension of time awarded for providing a second shaft was 2½ years from the 19th November 1864, there appears to be a chance of the shaft or outlet not being completed within the time; under favourable circumstances, however, I expect it will be completed within the time allowed.

At Ryhope Colliery, where the time awarded for providing a second shaft or outlet was 4 years from the 31st December 1864, I think the sinking of the second shaft will be ready considerably within the time allowed.

Employment of boys in mines.

There are scarcely any collieries in the district where they profess to employ boys under 12 years of age within the mines, yet it appears to be probable that in a few instances parents may state their boys to be twelve years of age before they have attained that age in order to get them employed a little earlier.

In the few instances where boys between 10 and 12 years of age are allowed to commence to work in the mines, it is, I believe, almost always only upon the condition of their being able to read and write before they are so employed.

I believe there are a few rare and exceptional cases where boys between 10 and 12 years of age, and who are unable to read and write, are allowed to work in the mines on the condition of their attending school and obtaining certificates as to such attendance as required by the Act; but the general feeling appears to be to avoid all trouble in this mattter by adopting the practice already mentioned.

Relative magnitude and importance of the South Durham Inspection District.

Although the area of this district is much smaller than that of most of the other inspection districts and contains only about 155 collieries, yet the quantity of coal raised in it is considerably greater than in any of the other inspection districts.

I have, &c.
(Signed) John J. Atkinson,
Inspector of Mines.

To the Right Hon. S. H. Walpole, M.P.,
Her Majesty's Principal Secretary of
State for the Home Department,
&c. &c. &c.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS of LIFE arising therefrom, in SOUTH DURHAM INSPECTION DISTRICT, during the Year ended 31st day of December 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866.														
Jan. 12	1	Pelton - -	Chester-le-Street	Lord Dunsany & Bros. -	William Cowell -	Putter -	17	Killed by tubs in engine plane when riding contrary to orders, and to a printed rule or notice; arising from a collision.	–	–	–	1	–	5
					Robert Wright -	Incline boy	13		–	–	–	1	–	
					Frank Shotton -	Driver -	12		–	–	–	1	–	
					Thomas Harrison -	Flat-keeper	14		–	–	–	1	–	
					Roger Gray -	Driver -	14		–	–	–	1	–	
,, 25	2	West Pelton -	Chester-le-Street	John Joicey & Co. -	Thomas Roseby -	Deputy -	49	Fall of stone, drawing timber -	–	1	–	–	–	1
,, 26	3	Rainton -	Durham - -	Earl Vane - -	Christopher Wright	Hewer -	28	Fall of stone - - - -	–	1	–	–	–	1
,, 28	4	Brancepeth -	Durham - -	Strakers & Love - -	Thomas Maude -	Joiner -	16	Fall of erections - - -	–	–	–	–	1	1
,, 29	5	South Hetton -	Fencehouses -	South Hetton Coal Co. -	Thomas Robinson -	Fireman -	27	Boiler explosion - -	–	–	–	–	1	1
,, 31	6	Rough Lea -	Willington -	H. Stobart & Co. -	Thomas Sproates -	Screener -	15	Crushed by railway truck - -	–	–	–	–	1	1
Feb. 3	7	Houghton -	Fencehouses -	Earl of Durham - -	John Fergison -	Sinker -	–	Falling of a bursted pump -	–	–	1	–	–	1
,, 5	8	Belmont -	Durham - -	Chas. Bell and Co. -	John Cowey -	Hewer -	23	Fall of stone - - -	–	1	–	–	–	1
,, ,,	9	Shotton - -	Fencehouses -	Haswell Coal Co. -	Robert Elsdon -	Driver -	14	Crushed by tubs - - -	–	–	–	1	–	1
,, 6	10	Auckland Park	Bishop Auckland	Black Boy Coal Co. -	George Wheatley -	Stone worker	40	Falling down a staple - - -	–	–	–	1	–	1
,, 16	11	Ryhope -	Sunderland -	Messrs. Taylor & Co. -	Patrick Burk -	Driver -	17	Whilst ascending shaft - -	–	–	1	–	–	1
,, 19	12	South Kelloe -	Ferry Hill -	Trustees of West Hartlepool Dock and Railway Co. -	Joseph Hayes -	Hewer -	40	Whilst descending shaft, hit his head against bunting.	–	–	1	–	–	1
,, ,,	13	Black Boy -	Bishop Auckland	Black Boy Coal Co. -	John Railton -	Pony driver	17	Crushed by tubs - - -	–	–	–	1	–	1
,, 24	14	Iveston Winning	Lanchester -	Consett Iron Co. - -	George Hunter -	Joiner -	26	Fell down staple whilst laying a floor in engine house; plank canted.	–	–	1	–	–	1
,, 27	15	Newbottle -	Fencehouses -	Earl of Durham - - -	William Clark -	Shifter -	–	Fall of stone - - - -	–	1	–	–	–	1
Mar. 1	16	South Hetton -	Fencehouses -	South Hetton Coal Co. -	John Cummings -	Gas-maker	36	Explosion of gas at a refiner -	–	–	–	–	1	1
,, 12	17	Houghall -	Durham -	Joseph Love & Co. -	Walter Winham -	Deputy -	36	Fall of stone - - -	–	1	–	–	–	1
,, 13	18	Hetton -	Fencehouses -	Hetton Coal Co. - -	Thomas Emmerson	Onsetter -	38	Struck by a bolt and fell down shaft	–	–	1	–	–	1
,, 21	19	Trimdon -	Ferry Hill -	Thomas Wood - -	John Malone -	Driver -	12	Fall of stone in broken when away from his work.	–	1	–	–	–	1
,, ,,	20	Tursdale -	Ditto - -	Bell Brothers - -	Moses Platts -	Pony driver	17	Crushed by tub - - -	–	–	–	1	–	1
April 1	21	Job's Hill -	Crook - -	J. Pease & Co. - -	Joseph Soulsby -	Rope guider	–	Crushed between rope and drum -	–	–	–	1	–	1
,, 4	22	Lumley (6th pit)	Fencehouses -	Earl of Durham - -	William Bennett -	Sinker -	31	Fell down a staple - -	–	–	–	1	–	1
,, 6	23	Eppleton (Jane pit).	Ditto - -	Hetton Coal Co. - -	William Laverick -	Hewer -	19	Fall of stone - - -	–	1	–	–	–	1
,, 10	24	Black Boy -	Bishop Auckland	Black Boy Coal Co. -	Richard Canby -	Hewer -	37	Crushed by tubs in engine plane -	–	–	–	1	–	1
,, 14	25	Ryhope -	Sunderland -	Ryhope Coal Company -	Benjamin Westbury	Furnaceman	50	Crushed by cage in cage hole -	–	–	1	–	–	1
,, 21	26	Whitworth -	Ferry Hill -	R. S. Johnson & Co. -	Dolphin Chalder -	Trapper -	12	Crushed by tubs - - -	–	–	–	1	–	1
,, 23	27	Pelton -	Chester-le-Street	Lord Dunsany and others	James Graham -	Driver -	12	Crushed by tubs; away from his work	–	–	–	1	–	1

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866.														
Apr. 24	28	Black Boy	Bishop Auckland	Black Boy Coal Co.	William Gill	Pony driver	14	Crushed by tubs	–	–	–	1	–	1
,, 29	29	Haswell	Fence Houses	Haswell Coal Co.	William Sill	Plugman,&c.	28	In shaft, head gearing and rope breaking.	–	–	1	–	–	1
,, 30	30	Moorsley	Ditto	North Hetton Coal Co.	John Fletcher	Pony putter	14	Crushed by tubs	–	–	–	1	–	1
May 14	31	Dryburn Grange	Durham	Earl Vane	James Hughes	Driver	14	Ditto	–	–	–	1	–	1
June 2	32	South Tanfield	Gateshead	John Joicy & Co.	William Sharp	Wailer	11	Falling off a truck	–	–	–	–	1	1
,, 4	33	Hedley Hope	Crook	Joseph Pease & Co.	James Heskett	Hewer	–	Fall of stone	–	1	–	–	–	1
,, 7	34	Wingate Grange	Ferry Hill	John Gully's Executors	Joseph Hays	Driver	–	Ditto and of timber	–	1	–	–	–	1
,, ,,	35	Seaham	Seaham	Earl Vane	John Hart	Hewer	32	Ditto	–	1	–	–	–	1
,, 11	36	Ditto	Ditto	Ditto	William Mould	Set rider	24	Crushed by tubs	–	–	–	1	–	1
,, 14	37	Lady Ann	Fence Houses	Earl of Durham	John Palmer	Hewer	27	Ditto in engine plane	–	–	–	1	–	1
,, 16	38	Pensher	Ditto	George Elliott & Co.	Robert Robson	Driver	–	Ditto by tubs	–	–	–	1	–	1
,, 26	39	Bishop's Close	Ferry Hill	Weardale Iron Co.	Thomas Hutton	Hewer	40	Fall of stone	–	1	–	–	–	1
,, 30	40	South Hetton	Fence Houses	South Hetton Coal Co.	John Thompson	Shifter	58	Ditto	–	1	–	–	–	1
July 5	41	Frankland	Durham	Earl of Durham	Joseph Lyons	Switch-keeper	–	Crushed by tubs (neglect of switch)	–	–	–	1	–	1
,, ,,	42	WingateGrange	Ferry Hill	Executors of late J. Gully	Edward Churnside	Trapper	–	Crushed by tubs, driving; off his duty.	–	–	–	1	–	1
,, 19	43	Ryhope	Sunderland	The Ryhope Coal Co.	James Hallert	Screenman	27	Run over by laden waggons	–	–	–	–	1	1
,, 21	44	Lumley	Fence Houses	Earl of Durham	William Ferguson George Harbottle	Hewer Ditto	– –	Killed by a chain falling down shaft when about to ascend.	–	–	2	–	–	2
,, 25	45	Castle Eden	Ferry Hill	W. Cook	Brydon Robson	Ditto	40	Fall of top coal	–	1	–	–	–	1
,, 27	46	Ditto	Ditto	Ditto	John Robinson	Coupler	14	Crushed by tubs in engine plane	–	–	–	1	–	1
,, 28	47	Wingate Grange	Ditto	John Gully's Executors	Joseph Henderson	Branch driver	–	Crushed by waggon	–	–	–	–	1	1
Aug. 16	48	Adelaide	Bishop Auckland	Joseph Pease and Partners	Thomas Clark Robert Morrow James Maitland Robert Davison	Stone worker Do. & hewer Do. & hewer Do. & shot firer.	28 39 33 34	By an explosion of fire-damp at a shot used for blasting stone, in the 4-feet or Harvey seam.	4	–	–	–	–	4
,, ,,	49	Whitworth	Ferry Hill	R. S. Johnson & Co.	F. F. Teasdale	Stoneman	24	Explosion of gunpowder	–	–	–	1	–	1
,, 17	50	Ryhope	Sunderland	Ryhope Coal Co.	William Thompson	Branch driver	34	Foot crushed by waggon	–	–	–	–	1	1
,, 26	51	Seaham	Seaham	Earl Vane	Joseph Wilson	Horse driver	12	Crushed by tubs in incline	–	–	–	1	–	1
,, 29	52	Shincliffe	Durham	Joseph Love and Partners	James Dodsworth	Screenman	50	Crushed by waggons	–	–	–	–	1	1
Sept. 1	53	Hedley Hope	Crook	Joseph Pease and Partners	George Thew	Horse driver	12	Crushed by tubs	–	–	–	1	–	1
,, 9	54	Ryhope	Sunderland	Ryehope Coal Co.	James Mc Guire	Ditto	12	Kicked by horse	–	–	–	1	–	1
,, 12	55	Trindon Grange	Ferry Hill	M. Foster	George Pembleton	Hewer	26	Fall of stone	–	1	–	–	–	1
,, 28	56	South Hetton	Fence Houses	South Hetton Coal Co.	John Paul	Driver	15	Crushed by tubs	–	–	–	1	–	1

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866. Sept. 28	57	Houghton	Fence Houses	Earl of Durham	George Adamson	Sinker	—	Stone falling in sinking pit	—	—	1	—	—	1
„ 27	58	Shotton	Ditto	Haswell Coal Co.	Joseph Heron	Wasteman	70	Fall of stone	—	1	—	—	—	1
Oct. 2	59	Hetton	Ditto	Hetton Coal Co.	Jos. Dalkin	Eng. bank boy	12	Crushed by tubs in engine plane	—	—	—	1	—	1
„ 6	60	Newbottle	Ditto	Earl of Durham	Robert Stephenson	Driver H.	14	Fall of stone	—	1	—	—	—	1
„ 8	61	Ryhope	Sunderland	Ryhope Coal Co.	Owen McCannon	Nut putter	29	Crushed by apparatus tub	—	—	—	—	1	1
„ 9	62	Willington B. pit	Willington	Strakers and Love	Wm. Snaith	Deputy	29	Fall of stone (drawing timber)	—	1	—	—	—	1
„ 15	63	Seaham No. 2 pit	Seaham	Earl Vane	Geo. Dormand	Chock drawer	58	Fall of stone while drawing timber	—	1	—	—	—	1
„ 16	64	Coxhoe	Ferry Hill	Morrison and Co.	John Shannon	Hewer	26	While ascending shaft	—	—	1	—	—	1
„ 16	65	Seaham No. 1 pit	Seaham	Earl Vane	Thos. Turnbull	Bank overman	37	Fall of stone on engine plane	—	1	—	—	—	1
„ 20	66	Bowden Close	Crook	Joseph Pease and Partners	John Smiles	Hewer	20	Crushed by tubs	—	—	—	1	—	1
„ 26	67	Inkerman	Tow Law	Ferens and G. Love	Wm. Platt	Stone worker	51	Fall of stone after blasting	—	1	—	—	—	1
„ 31	68	Pelton	Chester-le-Street	Lord Dunsany and Partners	Robt. Curry	Driver	12	Killed by an explosion of fire-damp in the Busty Bank Seam of coal.	24	—	—	—	—	24
					Robt. King	Putter	18							
					William Elliott	Driver	11							
					Joseph Gladsome	Trapper	11							
					George Cook	Putter	22							
					John Frecker	Flat boy	14							
					Richard Argyle	Coupler	13							
					John Simpson	Hewer	22							
					John Anderson	Wood-leader	18							
					John Gray	Deputy	32							
					Jon. Maddison	Ditto	22							
					John Bell	Hewer	19							
					James Dixon	Ditto	20							
					Robert Weddle	Ditto	34							
					William Felton	Coupler	11							
					John Laverick	Hewer	27							
					Henry Bateman	Putter	19							
					John Carter	Hewer	52							
					John Richardson	Ditto	28							
					Roger Brown	Ditto	39							
					John Taylor	Ditto	41							
					Wm. Charlton	Ditto	20							
					Henry Gray	Ditto	38							
					George Oughton	Putter	18							

List of Fatal Colliery Accidents—*continued.*

Date	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866.														
Nov. 2	69	Sherburn	Durham	Earl of Durham	William Hunter	Deputy	35	Fall of stone	–	1	–	–	–	1
„ 3	70	Eppleton	Fencehouses	Hetton Coal Company	William Wilson	Smith	12	Crushed by tubs in engine plane	–	–	–	1	–	1
„ 6	71	Auckland Park	Auckland	C. L. Wood and Co.	William Bewick	Pony putter	16	Crushed by tubs	–	–	–	1	–	1
„ „	72	South Durham	Ditto	Smithson and Co.	William Richardson	Hewer	20	Falling into sump	–	–	1	–	–	1
„ 10	73	Kelloe	Ferry Hill	M. Foster and Co.	John Jones	Driver	13	Crushed by tub	–	–	–	1	–	1
„ „	74	Byron	Chester-le-Street	Sowerby, Phillips, and Co.	Thomas Atkinson	Hewer	—	Fall of stone	–	1	–	–	–	1
„ 19	75	Seaham, No. 2 pit	Seaham	Earl Vane	William Forster	Driver	13	Crushed by tubs in engine plane	–	–	–	1	–	1
„ 23	76	Pelton	Chester-le-Street	Lord Dunsany and Partners.	Charles Clark	Hewer	29	Crushed by tub	–	–	–	1	–	1
„ 30	77	Whitworth	Ferry Hill	R. S. Johnson and Co.	Isaac Gills	Helper-up	15	Crushed by tubs	–	–	–	1	–	1
Dec. 1	78	Murton	Fencehouses	So. Hetton Coal Company	Henry Caddoe	Driver	14	Crushed by tubs in inclined plane	–	–	–	1	–	1
„ 4	79	Woodifield	Crook	Bolckow and Vaughan	George Maddison	Putter	18	Injured by a bridge rail	–	–	–	1	–	1
„ 6	80	Byron	Chester-le-Street	Sowerby, Phillips, and Co.	Thomas Paxton	Labourer	22	Crushed by surface waggon	–	–	–	–	1	1
„ 7	81	Thornley	Ferry Hill	London Steam Colliery and Coal Company.	William Thompson	Pony putter	13	Crushed by tub	–	–	–	1	–	1
„ 12	82	Ditto	Ditto	Ditto	James Hope	Branch driver	39	Crushed by waggon	–	–	–	–	1	1
„ 13	83	Hedley Hope	Tow Law	Jos. Pease and Partners	John Brown	Driver	14	Crushed by tub	–	–	–	1	–	1
„ 19	84	Butterknowle	Cockfield	Trustees of Colliery	Thomas Dart	Hewer	21	Fall of stone	–	1	–	–	–	1
								Total	28	23	12	40	12	115

Mr. Dickinson's Report.

Report on the Inspection of Mines in the North and East Lancashire or Manchester District for the Year ended 31st December 1866.—By Joseph Dickinson, Esq., F.G.S.

Sir,

Pendleton, Manchester, February 28, 1867.

The accidents.

I have the honour to report to you that the lists for the year 1866 show, that in the Manchester district of Lancashire the total colliery accidents were 58, and the deaths from the same 69. These numbers include three accidents and three deaths in the portion of the Wigan district of Lancashire, which was transferred to the Manchester district at the commencement of 1866. Including these, three of each, the accidents are three less, but the deaths three more than in the previous year, whilst the accidents are 5·3 less and the deaths 21 less than the average for the 10 years ending 1861; the numbers being:—

Comparison with previous years.

Year.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	10 Years Average.	1862.	1863.	1864.	1865.	1866.
Separate Accidents.	60	60	73	78	73	52	60	55	55	67	63·3	56	60	60	61	55
												Transferred portion				3
																58
Deaths -	113	82	87	89	84	99	138	68	58	82	90·0	59	68	64	66	66
												Transferred portion				3
																69

Proportion of accidents to persons employed, and coal wrought.

The return of persons employed in and about the collieries and of coal raised shows, that in 1866 there were 25,440 persons, including those in the transferred portion, and that the quantity of coal wrought was 6,774,000 tons, being an increase of 1,915 persons and 462,000 tons, as compared with the year 1865. This gives, in 1866, one fatal accident to every 438 persons employed and 1 death to every 368, which is more favourable than in 1865, when the fatal accidents were 1 to only 385 and the deaths 1 to 356. The proportion of coal wrought has also been increased from 103,475 tons per separate fatal accident in 1865 to 116,793 tons in 1866, and from 95,636 tons for each death in 1865 to 98,173 tons in 1866. Returns of this description would be fallacious unless the numbers of persons employed and coal wrought were correctly ascertained, and as there are no means of getting the information, unless it be voluntarily given by the colliery owners, I should therefore state, that for both of the years named I have made application to them, and that the numbers for each colliery have been so numerously furnished to me that the totals may be relied upon as being substantially correct. For 1865 the portion of coal which I had to compute was that of ten owners, amounting to 264,315 tons, or only about 1/23rd part of the whole, whilst for 1866 it is only of six owners, amounting to 129,816 tons, or less than 1/50th of the whole. The collieries which I have made the computation for 1866 are Messrs. Dearden's, of Rochdale, Unity Brook, Great Harwood, Dootson and Vauze, Stonehill, and Long Lane, the latter colliery being now closed. The number of persons employed in 1865 was supplied to me in all except eight instances, and for 1866 it has been supplied in all except six instances, those being, with but one exception, that of Darcy Lever instead of Mr. Dearden's, the same as the collieries named.

Kind of accidents.

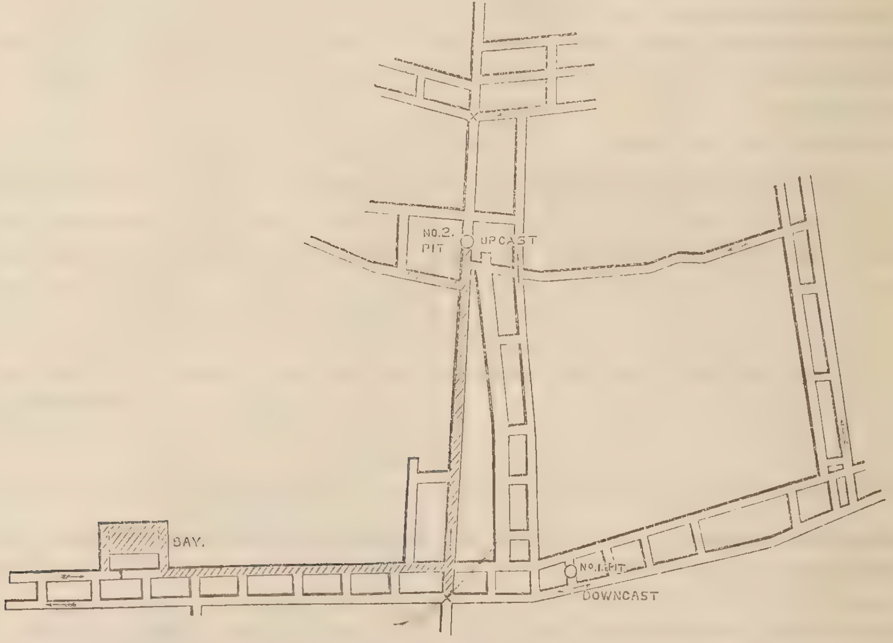
The 58 total accidents, causing the 69 deaths in 1866, were—

6	by explosions of fire-damp - -	causing	13	deaths
25	„ roof and coal falling - -	„	25	„
9	„ shaft accidents - -	„	9	„
10	„ miscellaneous acccidents underground	„	13	„
8	„ ditto ditto on the surface	„	9	„

e explo-
ns of fire-
np.

The explosions of fire-damp were at Lordsfield's Colliery, Ashton-under-Lyne; Clayton Colliery, Manchester; Albert Colliery, Westhoughton; Breightmet Colliery (Mr. Hardcastle's), near Bolton; Bank Colliery, Little Hulton; and Hoddlesden Colliery, Over Darwen. The most serious, indeed the only one in which more than one life was lost, was that in the Bank Colliery, and all the deaths are attributable to burning and none to suffocation by after-damp.

At Bank Colliery, 22 persons, including the underlooker and the fireman for that part of the pit, were burned, and two others injured; of these, eight of the former have died. All were brought out of the pit alive; some of those who were in the part where the fire was strongest being rescued chiefly by the prompt assistance of the fireman of the other part of the pit, Adam Eckersley, who, before other help arrived, brought some of them out after they had fallen down in the after-damp. The explosion was clearly proved to have arisen from a sudden outburst of fire-damp, which came out of the roof when the first large fall of roof took place in that part of the workings. It was in the Cannel Mine, which here ordinarily produces a large quantity of fire-damp; but the workings, as shown on the annexed plan, were of very small extent, and the ventilation apparently as much as the men could conveniently work in, and sufficient to dilute and render harmless the gas as it was ordinarily produced. No fire-damp whatever seems to have been accumulated in the workings previous to the explosion, nor, when I made my inspection the next day, could I find or hear of any that had been seen since. The underlooker and the fireman had only just left the place, everything being right, when the miners, finding them gone, as they expected, for the day, opened two of the safety lamps, and shortly afterwards the bay where they were at work began to fall in, liberating, as it appears, a large quantity of fire-damp into the return-air, and whilst the men were getting out of the way the gas became ignited, burning every person on the way to the upcast shaft; those who were in the in-take air, close to, and at the bottom of the downcast shaft, escaping unhurt. About 10,000 cubic feet of air per minute seems to have been passing through the bay at the time, and which became fouled, and was passing away in the return before it was fired, and but for the safety lamps being wrongfully unlocked and opened, the outburst of gas might have passed harmlessly away by the upcast shaft.



Note.—This is the plan of the Cannel Mine workings at the Bank Colliery, Little Hulton, referred to by me in my Report to the Secretary of State, dated 28th February 1867.

JOSEPH DICKINSON,
Inspector of Mines, Pendleton, Manchester.

The explosion in the Albert Colliery was in the Yard Mine, and arose under similar circumstances to that in the Bank Colliery, except that the men were using open lights, and that a portion of the gas became lighted almost directly as it issued and got mixed with a little air, whilst a large quantity which came off afterwards did not find air enough to make it burn, otherwise very much greater damage would apparently have been done. Previous to this the mine was considered safe with open lights, but safety lamps have been introduced since the outburst.

At Lordsfields Colliery the miner, after being out of his place, which was going up hill, omitted to examine with a safety lamp on returning.

At Clayton Colliery the miner passed the danger-signal, contrary to the rules, and whilst clearing out a little gas from the face of his place with a ventilating fan the gas lighted at his candle, which he had incautiously placed in the way.

At Breightmet Colliery the miner went with his candle into a suspended portion of the workings where no gas had been previously seen, but some having apparently become liberated by a small portion of the roof falling, he got burned. The fireman had not examined the place that day, and was discharged for the omission.

At Hoddlesden Colliery a little fire-damp came off at a fault, and from the statement made to me by the underlooker, George Adcroft, when I was officially investigating the matter, gas was suspected to be there, and the person was cautioned against entering, but the place was not fenced as required by the second General Rule. On proceedings, however, being taken by me against the owner for the neglect, the underlooker denied having said so; Mr. Joseph Place, the owner, being present and assenting on both occasions.

Boiler explosion.

The steam boiler which burst and killed two persons at the Towneley Colliery, was considered defective in not having a mouthpiece to strengthen the man-hole, as all steam boilers should have. The safety-valve also was considered of an imperfect construction, having a rigid screw instead of a weight to depend upon. The safety-valve had also been set by a steam-gauge instead of upon its own merits, and was apparently working at a pressure of nearly 150 lbs. per square inch instead of 80, as intended. The boiler was only a small one, and with a portable engine attached.

Inundation.

The inundation at Rough Bank Colliery, by which two persons were drowned, took place from some old workings being penetrated without the required boring in advance, for which penalties have been imposed.

Suffocation by white-damp.

The suffocation of three persons in the Union Pit of the Cliviger Colliery, by vapour which came from a part of the mine which had taken fire over night at an under-ground steam boiler. All appeared to be right the night before, but on going to work in the morning the fireman and a large number of others after him (of whom all except three were rescued) smelt the gas, but as it neither put their lights out nor exploded, they were proceeding to look from whence it came, when it overpowered them. I have in previous reports described this kind of gas; it is known as white-damp, and is occasionally met with, as in this instance, when a pit is on fire, also after firing gunpowder in a close place, and sometimes it is said, but very seldom, found coming out of the ground. On this occasion I collected some of the gas, and also some water which it had passed over and impregnated, and have had it chemically tested, and I find that it consisted of sulphuretted hydrogen, which is very poisonous. Near to the fire the smoke was visible on several occasions when I was in the pit afterwards, but where the men were affected was a long way from the fire, and the only indication seems to have been the smell, which, as near as I can describe it, was like water out of a gas meter.

Penalties imposed.

The following is a list of the cases in which I have caused legal proceedings to be taken for infringements of the law, and for which penalties have been imposed:—

	£	s.	d.
The manager, Brinsop Colliery, for permitting a boy under the prescribed age to be employed without a certificate - - - -	5	0	0
The owner and the manager, Rough Bank Colliery, for not having boring in advance when approaching an accumulation of water -	2	0	0
The owner, Bents Colliery, for not properly fencing off access to fire-damp - - - - - - - - -	5	0	0
The underlooker, Crow Nest Colliery, for omitting to have a mouthing in the shaft fenced - - - - - - -	2	0	0
The owner, Albert Colliery, for omitting within 24 hours to send notices of an explosion - - - - - -	3	0	0

The moiety of the penalty of 5*l.* as to the boy under age which the Act 5 & 6 Vict. c. 99. places at my disposal I have given to the fund for the relief of the sufferers by the Bank Colliery explosion. The 2*l.* as to the accumulation of water has, with your approval, been given to the widow of the miner who got drowned. The other penalties have been paid to the clerks to the magistrates to be paid over into the Consolidated Fund.

The Oaks Colliery Explosion, Barnsley.

Mr. Morton's health having broken down under the intense excitement and anxiety consequent upon the calamitous explosions in the Oaks Colliery, I have, in obedience to the commands contained in Mr. Waddington's letter of the 26th of December last, supplied his place as Inspector of Coal Mines at the inquest.

The inquiry was conducted by Mr. Thomas Taylor, one of the coroners for the county of York, and was concluded on the 31st ultimo. It extended to 13 days, during the latter 11 of which I was present. From the evidence it appeared that the first explosion took place on the 12th of December, when 340 work-persons were employed in the colliery, of whom only six have survived the injuries, making the loss of life 334 by that day's explosion. In addition to this, 27 persons, of whom 4 belonged to the colliery, and 23 who were volunteers, were killed by a succession of explosions (arising as it would appear from the pit having been set on fire by the first explosion), which commenced on the following morning whilst the workings were being explored for the purpose of rescuing any persons who might have survived and the bodies of those who had perished. It was only into the cause of the explosion on the 12th that the coroner's inquiry has at present extended. Of those who were down the pit when the explosions commenced on the 13th only one person escaped, and he is alive. The bodies of the 27 others, including those of Mr. Parkin Jeffcock, mining engineer, Mr. David Tewart, under-viewer of the colliery, Mr. Smith, under-viewer of Lund Hill Colliery, are still in the pit; there has therefore not as yet been an opportunity for an inquiry by the coroner into the cause of their deaths.

The pits being now closed up for the purpose of extinguishing the coal which has been set on fire by the explosions, and as a long time must necessarily elapse before they can be safely reopened, I may observe, with regard to the second and succeeding explosions, that sad as the result has proved to be to the explorers, it would have been much sadder but for the observation of a slight change perceived in the direction of the air by one of the deputies named Matthew Haigh, who attributed it to a flash of gas, and who made his escape, alarming a great number of others on his way out, and in this way saved the lives of six cagefulls of men, who rushed in a panic up the pit, the number on some of the cage loads being stated at as many as 15 in one load. The timely warning given by him was therefore apparently the means of saving between 60 and 90 lives. It is difficult to restrain persons from going into pits after an explosion when there may be a possibility of saving life, or for rescuing the bodies; but feeling should not be allowed to overcome judgment, and the danger of any unnecessary number of persons being allowed to go down at one time for this purpose ought not to pass unimproved. The deputy who in this instance saved so many lives was it seems called a coward, whilst rushing out; whereas in reality he was showing sound judgment; and on a similar occasion, at the Edmonds Main Colliery in the same neighbourhood, a few years ago, Mr. Morton, the Inspector of Coal Mines, Mr. Woodhouse, and Mr. John Brown, colliery viewers, were hooted from the pit bank for preventing persons going down, the soundness of their judgment being proved by a serious explosion which followed in the course of a very short time.

Of the 361 lives which have been lost in the Oaks Colliery on the 12th and 13th of December, 286 now remain in the pit. It is the most serious calamity which has occurred in any colliery in this or perhaps in any other country. Excepting, however, in the greater magnitude of the number of lives lost, there is nothing in which the explosion differs from a large number of similar occurrences; and there has been no special difficulty in the investigation.

From the testimony of the witnesses, there were large accumulations of fire-damp in the goaves. The gas there was in addition to the ordinary discharge of fire-damp, which appears to have been considerable; and the mine had been known on four occasions to give off suddenly immense outbursts of fire-damp without any explosion occurring, the safety lamps with which the mine was exclusively worked having on the occurrence of the outbursts proved sufficient for the gas to pass away safely. On the present occasion was there or was there not gas enough accumulated, together with that being gradually given off in the mine, without going into the supposition of any extraordinary outburst. The explosion took place at twenty minutes past one in the afternoon. That would be at a time when active work had been going on in the pit nearly the whole of the day. The pit would have been liberating its largest quantity of gas, owing to fresh "faces" being opened. It would also be nearly the warmest part of the day, when the atmosphere would be most expanded, and any given quantity of air have

OAKS COLLIERY,

Plan shewing Ventilation at the time of the Explosion,

ON THE 12TH DECEMBER, 1866.

REFERENCE.

Coal Worked colored thus	🟩
Working Places " "	🟥
Intake Air shewn thus	→
Return Air " "	→

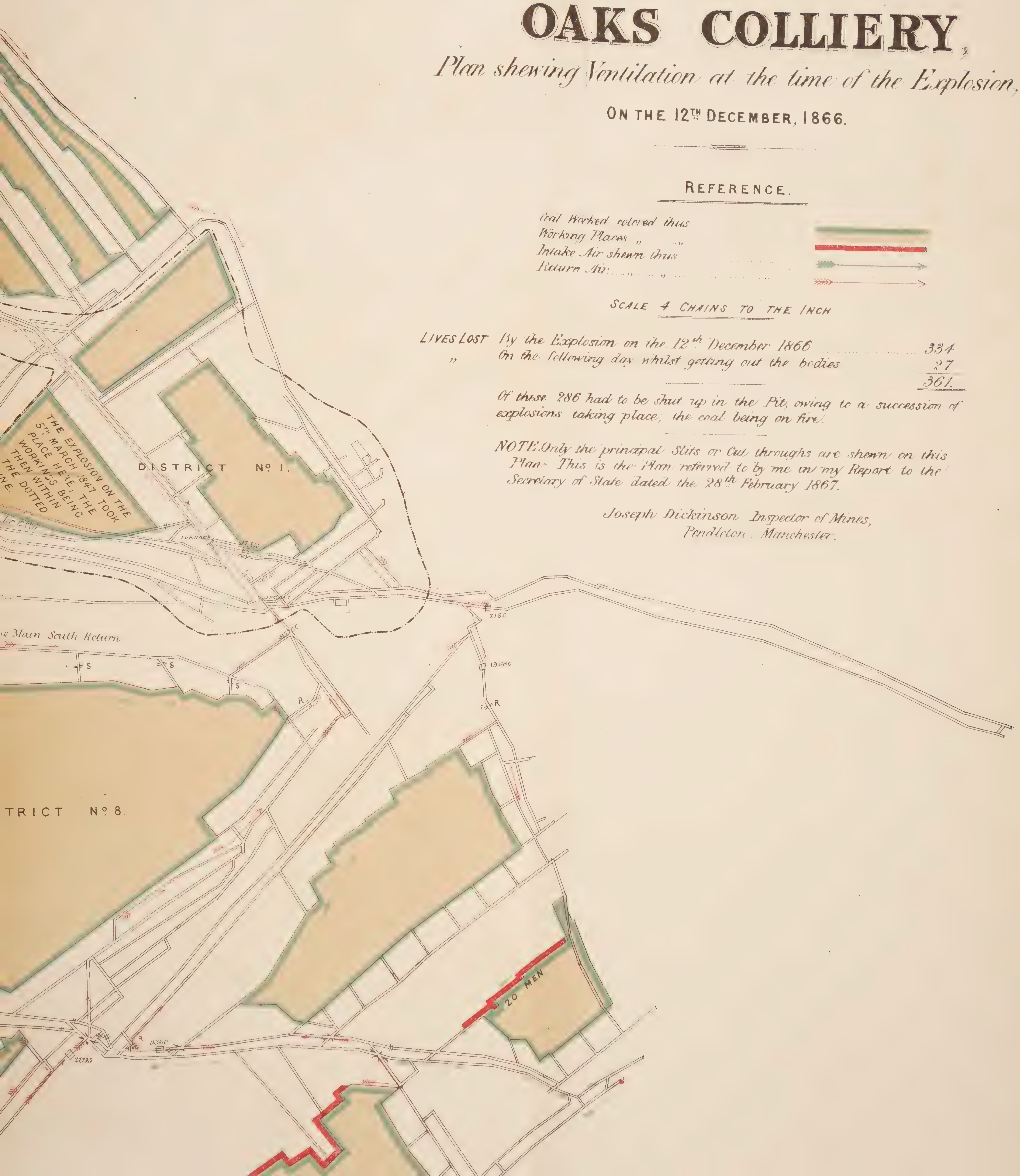
SCALE 4 CHAINS TO THE INCH

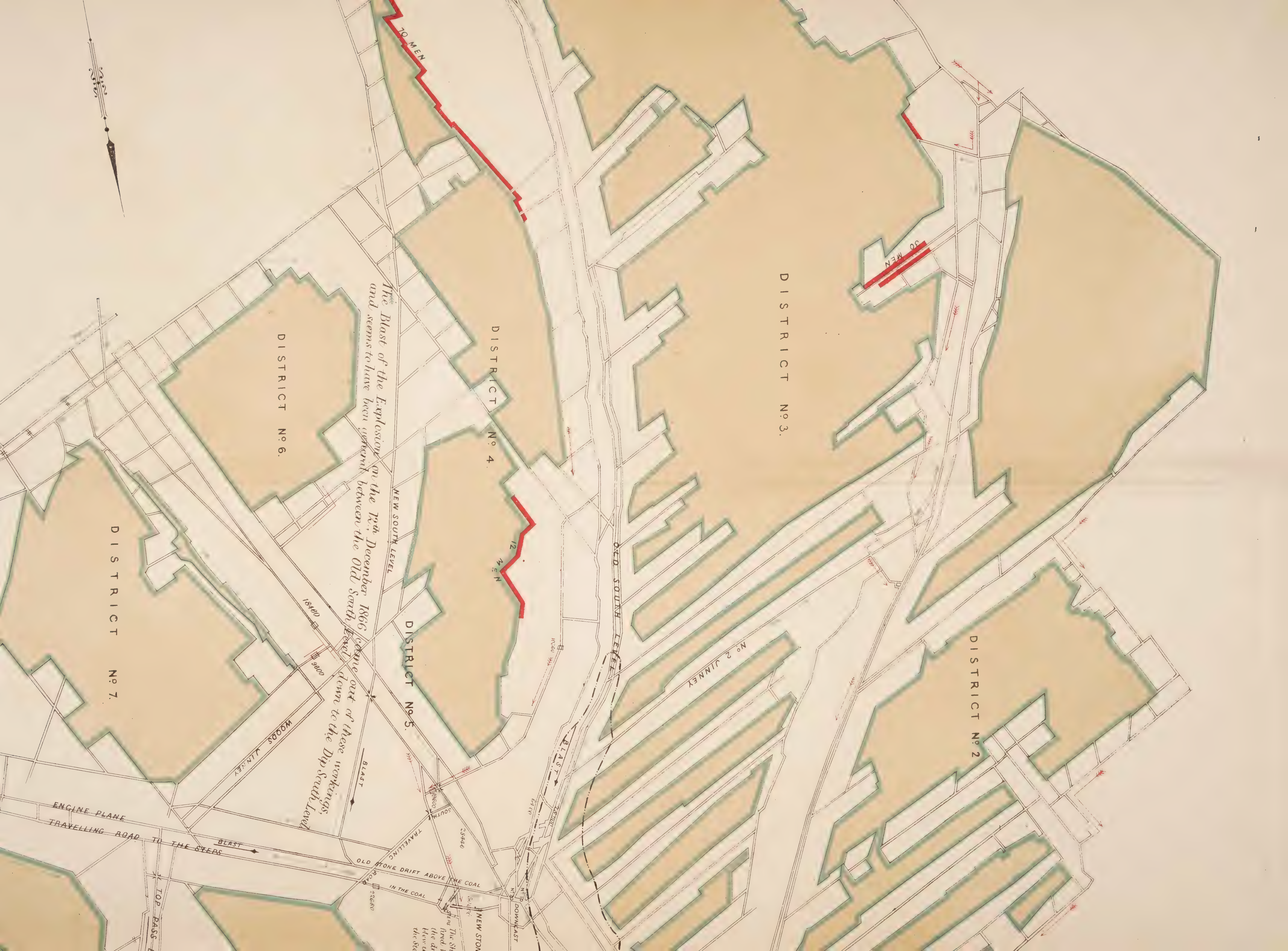
LIVES LOST	*By the Explosion on the 12th December 1866*	334
"	*On the following day whilst getting out the bodies*	27
		361.

Of these 286 had to be shut up in the Pit, owing to a succession of explosions taking place; the coal being on fire.

NOTE. Only the principal Slits or Cut throughs are shewn on this Plan. This is the Plan referred to by me in my Report to the Secretary of State dated the 28th February 1867.

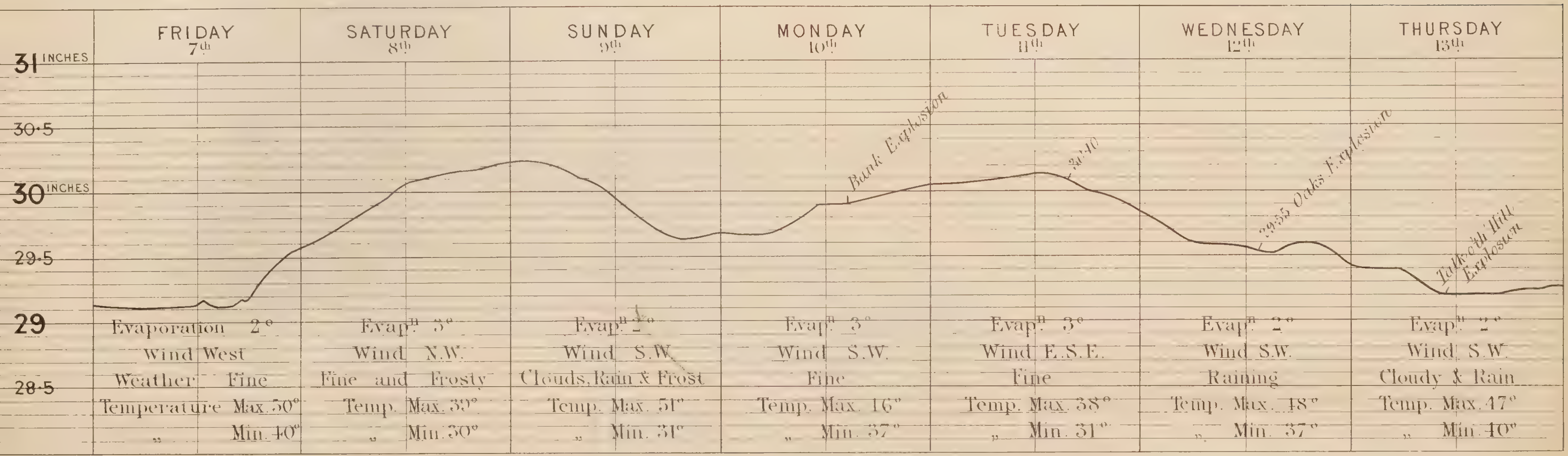
Joseph Dickinson Inspector of Mines,
Pendleton Manchester.


DISTRICT No. 1.
THE EXPLOSION ON THE 5TH MARCH 1847 TOOK PLACE HERE, THE WORKINGS BEING THEN WITHIN THE DOTTED LINE.
FURNACE
UPCAST
2160
19680
the Main South Return
S
R
TRICT No. 8.
20 MEN
9360


DISTRICT Nº 3.
DISTRICT Nº 4.
DISTRICT Nº 6.
DISTRICT Nº 7.
DISTRICT Nº 5.
DISTRICT Nº 2
70 MEN
30 MEN
12 MEN
NEW SOUTH LEVEL
OLD SOUTH LEVEL
Nº 2 JINNEY
WOODS JINNEY
BLAST
BLAST
BLAST
ENGINE PLANE
TRAVELLING ROAD TO THE STEPS
OLD STONE DRIFT ABOVE THE COAL
IN THE COAL
TRAVELLING ROAD
SOUTH
TOP PASS
18400
9800
19600
23440
22680
6400
Nº 10
Nº 11
DOWNCAST
STEPS
NEW STON

The Blast of the Explosion on the 12th December 1866 came out of these workings, and seems to have been generally between the Old South Level down to the Dip South Level.

DIAGRAM SHOWING THE HEIGHT OF THE BAROMETER AS MARKED HOURLY BY A SELF REGISTERING APPARATUS AT Mr CASARTELLI'S, MARKET STREET, MANCHESTER, DURING THE WEEK IN WHICH THE EXPLOSIONS OCCURRED IN DECEMBER, 1866.



Day & Son, (Limited) Lith. London. W.C.

OAKS COLLIERY EXPLOSION.

The Barometer falling from 30′10 to 29′55 would cause each 1000 Cubic feet of confined air and gas to expand and give off 18 Cubic feet. The ratio of expansion would be from a volume of $\frac{30'10}{29'55}$ = 1′018, or from 1000 to 1018.

Temperature. The volumes assumed by air and gas under altered circumstances, *when the pressure remains constant*, may be found from the fact that, the volume at O° or Zero of temperature is increased by $\frac{1}{459}$th part of that volume for each degree of increased temperature. Taking 459 Cubic feet of air as the original volume at O° then the volumes assumed by the same air at other and higher temperatures are: Temp. O° = Volume 459 Cubic feet; Temp. 1° = 459 + 1 = 460; Temp. 2° 459 + 2 = 461; Temp. 32° = 459 + 32, = Volume 491 Cubic feet. For Oaks Colliery Case, Minimum Temperature 37° = 459 + 37 = Volume 496 Cubic feet. Maximum Temperature 48° = 459 + 48° = 507. The expansion would be in the ratio 496 : 507 or $\frac{507}{496}$ = 1′022 = from 1000 to 1022. So that this change of temperature would cause each 1000 Cubit feet of confined air to give off 22 Cubic feet.

The Combined effects of the Fall in Barometer and Rise of Thermometer would cause each 1000 Cubit feet to throw off 18 + 22 = 40 Cubit feet or 4 per cent. of the volume of confined air and the least diluting power. It would also be the time when, by the rise of the temperature, the ventilating power of the furnace would be least efficacious. It was also at the time when one of the ventilating furnaces was slackened for cleaning. In addition to this, the barometer was falling. At one o'clock in the morning the pressure was 30·10, and at the time of the explosion 29·55. This fall in the pressure would cause each 1,000 cubic feet of confined air and gas to expand, and give off 18 cubic feet. Then, as to the temperature, in the morning it was 37°, and about the time of the explosion 48°. The expansion would therefore be in the ratio of 496 to 507, which is equal to from 1,000 to 1,022. So that this change of temperature would cause each 1,000 cubic feet of confined air and gas to give off 22 cubic feet. The combined effects of the falling of the barometer and the rise of the thermometer would cause each 1,000 cubic feet to throw off $18 + 22 = 40$ cubic feet, or 4 per cent. of the volume of confined air and gas. This would be in addition to the ordinary discharges of gas. In the state in which some of the goaves of the pit had been described to be at the time, I think we have evidence of sufficient fire-damp to account for the explosion, without supposing any extraordinary outburst.

As to how the fire-damp became lighted no clear evidence has been adduced. The safety lamps all appear to have been examined and locked as required, and the work persons seem to have been sufficiently aware of the danger to deter them from opening the lamps, as they sometimes do, although it is prohibited by a penalty of fine or imprisonment. There is the possibility that an accident happened to a lamp. But besides those safety lamps there were open gaslights extending from the bottom of the downcast shafts for 150 yards along the old south level, and also for 400 yards down the engine plane. There was also an open light occasionally used for relighting safety lamps at a lamp cabin called Thompson's box hole, 800 yards down the plane. Blasting was entirely prohibited in working the coal, but there was a new stone drift being driven from near the downcast shafts to some steps going down into a travelling road, in the main intake air-way, where blasting was allowed. There was no doubt from the evidence that the explosion took place when a shot was being fired, as several men, some of whom have survived, were warned into a sheltered place at the bottom of the shafts, and one of whom stated that the explosion of fire-damp followed the shot in about the space of time that it would take to count two after the shot had gone off. The drift was nearly through to the steps, and the shot, instead of blowing the stone out into the drift, as the previous shots had done, blew the bottom of the hole out, and the powder was discharged on to the steps, leaving the stemming and a partition of rock at the top of the hole undisturbed. The shot therefore went into a part of the mine where none of the previous shots had been discharged. The depth of the hole from which the powder had been fired was stated at about 30 inches, in addition to which it would seem there were 6 inches more from the traces of it which remained on one side from which the bottom had not been blown. That would make about 3 feet in length of powder. The hole, exclusive of the 6 inches, had been measured by another witness to 2 feet 7½ inches. The diameter of the drills with which the hole had been driven was not accurately known, but was supposed to be 2⅛ inches. According to these dimensions there was, therefore, a very much larger charge of powder being used than usual, apparently amounting to more like 6 lbs. than the smaller quantities of 1½ or 2 lbs. that the witnesses supposed. It seems reasonable to conclude that they were using a larger charge for the purpose of getting the drift through to the steps; and as the body of Wilson, the deputy who fired the shots, was found on the engine plane at the top of the steps, it would appear that he had gone there for the purpose of keeping persons off the steps, which was a main thoroughfare, whilst the partition was being blown through. The effect of such a large charge of powder fired in that part of the mine would be a considerable concussion in the air. The flame also from such a shot when it blew out of the hole would extend to a considerable distance. Whether the flame lighted any fire-damp in any of the old "slits" or "cut-throughs" at the south side I am unable to decide; but the concussion would certainly tend to disturb the gas accumulated in the goaves. There was an opening which had been made up with a stopping from near the bottom of the steps into the south return. That was in addition to an opening with two doors in it which went into the main south return air course. In addition to these also it appeared there were other "slits," any one of which, if not tightly made up, may have allowed the concussion of air to act upon the return air. Besides there was a clear open course along a lower level called the new level. In that part of the mine it would act upon the goaves containing gas, which was proved to be there by Cadman, the fireman, and by Bates and Thompson. How far that gas might have been disturbed, and brought in contact with any of the allowed open lights, I am unable to decide; but I incline to the opinion given by some of the witnesses, that of all the allowed open lights those along the old south level were the weakest points. The fire-damp might there have been lighted, and it would run back in a train to the goaves. I consider this not unlikely, as it would give us a centre from which the main blast had apparently radiated such as would reconcile the effects which appear to have been produced. The blast, as it was found to have done, would thus drive out along all the south levels, and the opposing force would become neutralised by one part of it coming against the other at the upper part of the engine plane, as it appears to have been.

In considering to what such a state of things was attributable, I have first to observe that there seemed to have been no want of care or discipline in carrying on the work, and the special rules duly established and enforced at the colliery were of the most stringent kind, supplying all that could be anticipated as a requisite for safety as contemplated by the Act of Parliament. The colliery was under the management of Mr. John Thomas Woodhouse, one of the most eminent mining engineers in this kingdom, and under him there was Mr. John Edward Mammatt, the resident viewer, who was 27 years of age, and who had been trained up to the profession of a mining engineer. Besides these gentlemen there was Mr. David Tewart, the under-viewer, who was a practical manager, and a staff of deputies, firemen, and eight lamp persons (six men and two boys).

The ventilation was skilfully laid out, and excepting at the rise side of the pit (where nearly all the coal was worked out, and not much fire-damp remained to be contended with, and which could not be more advantageously ventilated by any other plan), and in the small part of the workings called the dip-slant, where some new work had recently been commenced, the whole of the ventilation was being conducted upon the ascensional system. There were two downcast shafts, each 285 yards in depth and 7½ feet in diameter, and one upcast shaft the same depth, but with a chimney at the top, and 10¾ feet in diameter. The ventilating power was a pair of furnaces side by side, the fires being fed with fresh air, the return air from the workings being sent into the upcast shaft 70 yards from the furnace. The total quantity of air going down the downcasts amounted to about 152,000 cubic feet per minute. Of this 17,000 cubic feet supplied the furnaces, the remainder, 135,000, being divided into nine main splits or divisions, and used for ventilating the workings. The workings extended about a mile to the south along the old south level, and about a mile to the deep down the engine plane, but not so far to the north and west; the total length of underground galleries or roadways that were open, exclusive of the numerous goaves, being about 50 miles. The water-gauge, or pressure between the downcast and upcast shafts, was stated at rather less than one inch of water. This low pressure shows that for this extent of underground workings the air-ways must have been spacious, and the large quantity of air shows that the areas of the shafts, which, although small for the extent of workings, were, with such spacious air-ways, large enough for the supply of adequate ventilation.

In the far end of the Dip North Level there was an issue of fire-damp at a fault, which was collected and piped to the downcast shafts, and it was the gas that was used for lighting. An idea was suggested that this was the feeder which caused the explosion. The smallness of the quantity, however, and the way in which it was conducted in pipes, seems to preclude any such possibility. The total quantity only amounted to between 80 and 90 cubic feet per hour, or only about 1½ cubic feet per minute. This would be only a small proportion of the gas given off by the whole of the workings. What the total quantity was is not known; but it would now appear, from measurements taken since the pits have been closed up, when of course no fresh surfaces are being exposed in the coal so as to liberate fresh feeders of gas, but including any gas that may be given off by the decomposition of the bodies of the persons and the horses, and by the fires, reaches to about 550 cubic feet per minute, as it issues out of the pipe at the top of the shaft. The utilizing of the feeder of gas from the fault seems therefore to have been unobjectionable, and is in accordance with what I have seen safely practised in different collieries in Lancashire.

To what then is the cause of the explosion to be attributed. In my opinion clearly to the system upon which the colliery was worked. The seam of coal is known as the Barnsley bed. It is about 8 feet thick, and is notoriously fiery. The old workings at the rise of the shafts, and which were nearly finished, were upon the old Barnsley system; and it was in those workings and under that system that the explosion which took place in this colliery on the 5th of March 1847, when 73 lives were lost, occurred and under which several of the other great explosions in the neighbourhood of Barnsley have occurred. The workings at the deep of the shafts, where the present explosion originated, were upon the long-wall system. The whole of the working faces open at the time of the explosion, on the 12th of December 1866, amounted to about one mile in length. These faces, and the goaves behind them, some of which contained the fire-damp described, as well as other goaves where the work was finished, were scattered about in various parts of the workings, as shown on the annexed plan. The working places were at the rise side of each goaf, going up hill at an inclination of about 1 in 12, so that any fire-damp which might become dislodged from the goaves, by the roof falling or some other derangement, would at once go upon the men in those faces. The gate-roads by which the coal was brought from the faces came down through the goaves, the roof at the sides being supported with pack-walls. The pack-walls were built of stone which fell from the roof of the goaves, and it had to be brought out from behind the temporary supports called "chocks" at the faces. In getting this stone out the miners had to leave their safety-lamps outside, and go in to the goaf in the dark. The present system of working appears to involve this reprehensible practice, and it appears to be common to the other collieries worked upon the old system, and the long-wall system as now practised in this seam at Barnsley.

I am well aware that the system of working coal in any district is not a thing to be interfered with, except upon clearly different grounds. It has generally been arrived at after the trial of a great number of different modes, and is that which is found to be the best under all circumstances. To attempt to interfere with the recognized system of a district, except at a time like this, when the perception of every one is quickened, would be certain to produce no good effect; but the necessity has, to my mind, now appeared, and it behoves the mining engineers interested in the management of these mines to forthwith take the matter into their most serious consideration, in order that a suitable system may be introduced. To bring about an altered system will be a work of time, even if it be set about at once, and great explosions may happen during the transition.

In the course of the inquiry various suggestions were given by the witnesses as to how the system of working should be modified. In the opinions of some safety was to be found by working the faces down the hill, instead of up, so as to keep the gas away from the face of work; whilst others considered that course would be dangerous, on account of the roof and coal being forced down by the weight, and that the accidents which would in that way set in would be more serious than those which would be avoided. Another proposition was to modify the old system of working in banks, so that the working faces should go horizontally and at the low side of the goaves, involving the working faces of the coal, as the seam lies here, to be on the end of the cleavage instead of on the face, as usually practised, and which is only seldom found to be advantageous in practice. What is called the panel system, that is by dividing the colliery into distinct compartments, was also proposed, but in no instance did any witness know of any colliery that was being so worked; and it was stated that one of the greatest explosions in the Wallsend Colliery took place when this system was being tried.

It may be premature to suggest at present what in my opinion the system should be; but from what has come under my observation I am strongly impressed with the view that the system which I brought under the notice of the Select Committee of the House of Commons on Mines last year, and to the extension of which system in my own district I attributed the diminution which had taken place in the number of accidents and lives lost, concurrently with a large increase in the number of persons employed, is suitable for this seam. Under this system the levels are first driven out to the far ends, and the coal worked back from the extremities, having a substantial pack-wall built about three yards in width at the side of each working face. In this way all the goaves are left behind, and the pack-walls support the roof, and enable the ventilation to be kept up in the goaves sufficiently far from the working faces. By having more men in the same face of work than only two in from about eight to as much as 30 yards, as practised at Barnsley, the space of pit-room requisite to be kept open at one time might be much lessened, and the ventilation simplified. In Lancashire as many as eight men are sometimes put into such spaces of work as the above named. Putting so many men into one place is not, however, unattended with some disadvantages, as men, when crowded together, cannot get so well on with their work, and the noise sometimes prevents them from hearing when falls of coal and roof are about to take place, so that accidents from this cause become more numerous. The accidents in Yorkshire from all causes have been few in proportion to the coal raised and the number of persons employed, the great drawback being the occasional occurrence of very serious explosions. Under the present system the coal is got at as cheap a rate as any, but it has the counterbalancing disadvantage that a colliery owner may have a splendid property one day, and the next day it may be a wreck, and the pits, as in this instance, be closed.

It has been suggested that the area of coal to be worked by a pair of shafts, and the number of persons allowed to be down at one time, should be limited; and this view is entertained by some mining engineers whose opinions I respect. For my own part I consider that we live in the days of progress, and that as the sinkings become deeper we shall have to extend the area and increase the number of men. I look for increased safety to having the workings upon a proper system, such as I have recommended, and which answers well, and is found to be economical in the long run in my own district.

The jury, after, as it appeared, a good deal of discussion, agreed to the following verdict: "That Richard Hunt and others were killed by an explosion of gas or fire-damp "at the Oaks Colliery on the 12th of December 1866, but there is no evidence to "prove where or how it ignited. The jury think it unnecessary to make any special "recommendations as to the working of mines, seeing that the Government are "collecting information no doubt with a view of the better protection of life, but they "think a more strict inspection desirable."

As regards the recommendation of a stricter inspection, my opinion is well known. In my Reports for the years 1858 and 1862, and also at other times, I have gone into the subject, and shown what I believe to be the useful scope of the Government inspection of mines. I may repeat what I have said, to the effect that "it is not intended, nor is "it desirable, that the inspectors should act as the viewers or managers of the collieries, "but to be in the districts that matters may be referred to them; that in case of complaint or reason to suspect danger, the pits may be inspected, and the requisite steps "taken to remedy it without an accident occurring; and that when any accident has "occurred, which appears to require it, investigation may be made, in order to ascertain "whether the provisions of the law have been complied with, and that, if necessary, "the penalties for neglect may be proceeded for. It is apparent that when accidents "have occurred investigations press the responsibility of the management upon the "only parties to whom it attaches, and are the means of causing precautions to be "taken which are likely to prevent a recurrence. Mines continually require attention. "New roads are daily being made as the coal is worked, requiring renewed propping "and frequent changes in the ventilating arrangements, and the ventilating power must "be regularly kept up; wear and tear are also constantly going on of the ropes, steam "boilers, machinery, pit shafts, &c. If the view taken by some parties, therefore, that "inspection should reach further than this, were acted upon, it would tend to relieve the "owners and managers of mines of the responsibility which now devolves upon them, "and to throw it upon the Government, which, unless the inspectors were made as "numerous as the managers, and had an equally numerous staff, with power of control "over the expenditure, they could not possibly undertake."

By making my views known in this way the miners are aware that if there be any removable danger which the managers are neglecting to remove, they must inform me of it, or else there is very little chance of its coming under my notice, and they must stand the consequences. The result is, that in a large number of instances they do so bring it under my notice, and remedies are applied. It would be unwise, however, to suppose that all the knowledge of coal mining is wrapt up in the inspectors. In the case of the Oaks Colliery the management was in the hands of Mr. Woodhouse, whose emoluments as a mining engineer and viewer are far beyond those of an inspector; and Mr. Mammatt, the resident viewer, was the very material of which the inspectors are constituted, and from which, as vacancies occur, they have to be recruited; whilst in the under-viewer and the deputies and firemen is to be found the very class from which some persons appear to expect so much, if they were acting under the Government, instead of being, as they were, the responsible managers in their several departments. The subject should be looked at fairly and calmly. If the inspection becomes too frequent the inspectors would be likely to become implicated in the management, and when an accident takes place their position would not be sufficiently disinterested to enable them to make an independent investigation, and it would require for that purpose some disinterested person to be called in to see that the provisions of the law were enforced, thereby tending to lower the standing of the inspector, and lessen his usefulness in his district. The districts, if made small, would also lessen the opportunities for comparison, which it is requisite there should be, for the spread of improvements. This necessitates the duties of an inspector being very laborious, and I do not see how it can be otherwise, unless an assistant could be given to each, as was suggested to the Committee on Mines last year by Mr. Woodhouse. The responsibility must rest somewhere. Hitherto it has been decided that it is best upon the owners and managers. But if it be intended that the Government should assume the responsibility, then the whole subject of the inspection will require reconsideration.

So far as inspection might have been brought into play at the Oaks Colliery, it appears that on the 30th of November, just 12 days before the explosion, complaint of fire-damp in a certain part of the workings (together with a question relating to wages) was made to the principal owner of the colliery, who was himself conversant with coal mining. He said if that be so both the men's lives and my property are at stake, and he forthwith, in company with the deputation and the under-viewer (the viewer being from home), proceeded down the pit to the place complained of, and made examination. It appears no gas was found, but the ventilation of that part was weak, and it was arranged that the under-viewer should send more air there. It seems it was discussed amongst the miners whether Mr. Morton, the inspector's, attention should be called to the matter, but it was decided not to do so; and that opportunity of avoiding the explosion was lost. The health of Mr. Morton had not been good for some time lately, he having suffered severely from rheumatism, in which he was by no means an exception amongst the inspectors, who are much exposed to chills, and when at any time he was unable to attend to any matter, he always had my assistance when he called for it, and so far as I am aware no duty has been omitted. Until his illness set in he was one of the most energetic inspectors, and now that his health has failed the public are deprived of of one who has done good service.

The present Act of Parliament, although not perfect, appears to me to be a very good Act, and anything that is found wanting in it may be supplied by altering the special rules when it becomes apparent. A most important doubt appears to be as to whether the Act extends to the system of working which is followed. In the opinion of the inspectors of mines the system of working is comprised by the Act, and may be arbitrated if it appears to be "dangerous or defective, so as to threaten or tend to the "bodily injury of any person." But a contrary opinion has been expressed by some colliery owners, and it ought not to be involved in doubt. The subject is one of great gravity as regards the working of the Barnsley bed of coal, and if it be not forthwith taken up by the owners and viewers interested, and it is found that the power of arbitration does not extend to it, then additional legislation appears to be essential, and at the same time, if the matter has to be re-opened, the statutes relating to mining might all be incorporated into one, and some slight alterations be made with advantage.

I have, &c.
(Signed) JOSEPH DICKINSON,
Inspector of Coal Mines.

The Right Hon. S. H. Walpole, M.P.,
Principal Secretary of State, Whitehall.

LIST of the OWNERS and COLLIERIES in the Manchester District of Lancashire, specifying those where Fatal Accidents have taken place in the Year 1866.

Number.	Owners.	Colliery.	Address.	Accidents.	Deaths.
1	Arley Main Company	Park Hall	Blackrod, Chorley	1	1
2	Edward Ashworth	Brandwood Moor	Cowpe, Waterfoot.		
3	Ashworth and Howarth	Starin	Littleborough.		
4	Ashworth and Lees	Ealees	Ditto.		
5	Astley and Tyldesley Coal and Salt	Astley and Tyldesley	Tyldesley	1	1
6	Company (Limited).				
7	Joseph Bagnall	Higginshaw	Royton, Oldham.		
8	Bankhouse Company	Bankhouse	Bagslate, Rochdale.		
9	Bardsley Company	Bardsley	Ashton-under-Lyne	2	2
10	James Barker	Pemberton House	Charnock-Richard, Chorley.		
11	James Barlow	Whittlestone Head	Entwistle, Bolton.		
12	Executors of Joseph Barnes	Dunkenhalgh Park	Church, Accrington.		
13	Matthew Bennett and Brothers	Street Gate	Little Hulton, Bolton.		
14	John G. Blackburne	Lowside	Oldham.		
15	Blue Ball Company	Blue Ball	Bacup.		
—	Executors of Wm. Booth	Baitings	Wolstenholme, Rochdale.		
16	Booth and Marland	Honey Well Lane	Oldham	1	1
17	Right Hon. the Earl of Bradford	Great Lever	Bolton.		
		Burnden	Burnden.		
		Great Lever	Great Lever.		
		Hacken	Darcy Lever.		
		Raikes	Great Lever.		

List of the Owners and Collieries in the Manchester District, &c.—*continued.*

Number.	Owners.	Colliery.	Address.	Accidents.	Deaths.
18	James Brearley and Son	Brandwood Moor	Waterfoot	1	1
	Bridgewater Trustees	Bridgewater	Worsley.		
19		Ashtonsfield	Little Hulton.		
20		Barracks	Ditto.		
21		Bridgewater	Worsley.		
22		Buckley Lane	Little Hulton	1	1
23		Burgess Land	Ditto.		
24		Delph	Middle Hulton.		
25		Edge Fold	Worsley.		
26		Ellenbrook	Tyldesley.		
27		Gatley	Ditto.		
28		Howarths Field	Farnworth.		
29		Linnyshaw	Worsley	1	1
30		Lords Moss Field	Farnworth.		
31		Madams Wood	Little Hulton.		
32		Mangnalls	Worsley.		
33		Mosley Common	Tyldesley.		
34		Sanderson	Worsley.		
35		Saplingfield	Middle Hulton.		
36		Tonges Field	Farnworth.		
37		Wardley Coppice Field	Worsley.		
38	Brimrod Company	Brimrod	Rochdale.		
	Brooks and Pickup	Towneley	Burnley.		
39		Cupola	Hameldon Burnley.		
40		Towneley	Burnley	1	2
41		Wholaw Nook	Wholaw, Burnley.		
42	Edmund Butterworth and Sons	Crow Knowl and Doghill.	Crompton, Oldham.		
43	James Butterworth	Oaken Clough	Bacup.		
44	James Butterworth and Son	Greenbooth and Knowl	Rochdale.		
45	Thomas Butterworth	Bent Grange	Oldham.		
46	Chamber Company	Oak	Hollinwood.		
47 48		Chamber and Chadderton.			
49	Francis Charlton	Wharton	Little Hulton, Bolton	1	1
50	Edmund Clegg and Son	Turf House	Littleborough.		
	Clifton and Kearsley Company	Clifton	Manchester.		
51		Botany Bay Bus and Robin Hood	Clifton.		
52		Manor	Kearsley.		
53		Spindlepoint	Kearsley.		
54		Wetearth	Clifton.		
	Cliviger Company	Cliviger	Burnley.		
55		Coppy.			
56		Union.	- - - -	1	3
57	James Collinge and Co.	Glodwick	Oldham.		
58	Thos. Cross	Doffcocker	Halliwell, Bolton.		
59	Charles Crossley	Crook Bank	Wardle, Rochdale.		
60	Darcy Lever Company	Darcy Lever	Bolton.		
	James Darlington	Blainscough Hall	Coppull, Chorley.		
61		Springfield and	- - - -	1	1
62		Welch Whittle	- - - -	1	1
	James Dearden	- - - -	The Orchard, Rochdale.		
63		Cartridge Nook.			
64		Handle Hall	Calderbrook.		
65		Italy	Dulesgate, Todmorden.		
66		Land	Shawforth.		
67		South Grain	Dulesgate, Todmorden.		
68		Toadleach	Healey.		
69		Todmorden Moor	Dulesgate, Todmorden.		
70		Tooter Hill	Bacup.		
71		Wallnook	Wardle.		
72 73	Dewhursts, Hoyles, and Smethurst	Anderton Hall and Rigby Hall.	Blackrod, Chorley.		
74	James Diggle	Westleigh and Heyfield	Westleigh	3	3
75					
	Executors of Lawrence Duckworth	- - - -	Stubbins, Ramsbottom.		
76		Scout Moor	Shuttleworth.		
77		Shipperbottom	Walmersley.		
78		Top-o'-th'-Hill	Bury.		
79	Ralph Entwistle	Over Darwen	Over Darwen.		

List of the Owners and Collieries in the Manchester District, &c.—*continued.*

Number.	Owners.	Colliery.	Address.	Accidents.	Deaths.
80	Edmund Fairburn	Bank Hey	Wardle, Rochdale.		
81	Nicholas Fish, sen.	Old Lyons	Belmont, Bolton.		
82	Nicholas Fish, jun.	Wildersmoor	Rivington, Bolton.		
83	H. H. Fishwick and Co.	Brotherod	Rochdale.		
	Trustees of Ellis Fletcher	Bus	See Clifton and Kearsley Co., who are now the Owners	1	1
		Spindlepoint		3	3
		Wetearth	-	1	1
84	Trustees of Ellis Fletcher	Denton	Near Manchester	3	3
85	John Fletcher	Ladyshore	Little Lever, Bolton.		
86	John Fletcher and others	Atherton	Near Manchester.		
87		Chanters	Chowbent	1	1
88		Gibfield	Atherton.		
		Howbridge	Chowbent	1	1
89	Thos. Fletcher	Stopes and Bents	Little Lever, Bolton.		
90		Bradleyfold	Little Lever	2	2
91		Stopes	Ditto.		
92		Black Moss	Radcliffe	1	1
93		Breightmet	Breightmet	1	1
		Radcliffe Moor	Ainsworth.		
94	Thos. Fletcher and Sons	Outwood	Near Manchester.		
95	Fletcher and Scowcroft	Great Boys	Tyldesley.		
96	Richd. Fort, M.P.	Great Harwood	Accrington.		
97	John Gerrard	Albert	Westhoughton, Bolton	1	1
98	John Gibson and Co.	Smithfold	Little Hulton, Bolton.		
99	James Gidlow	Arley Hall New	Blackrod, Chorley	1	1
100	John Gregory	Snapes	Westleigh.		
101	Charles Haigh	Trough	Whitworth, Rochdale.		
102	Reuben Haigh and Co.	Foulclough	Todmorden.		
103	Hall and Rogers	Cleggswood Pottery	Littleborough.		
104	Hall and Urmson	Moss	Bagslate, Rochdale.		
105	James Hardcastle	Bradshaw and Harwood	Bolton.		
106	Ditto	Breightmet	Bolton	1	1
107	James Hardman	Wellclough	Stacksteads.		
108	Executors of John Hargreaves	Burnley, &c.	Burnley.		
109		Bank Hall	Burnley.		
110		Burnt Hills	Wholaw Nook.		
111		Cornfield	Gawthorpe	1	1
112		Foxclough	Colne.		
113		Gannow and Habergham	Habergham Eaves	1	1
114		Hapton Valley	Hapton.		
115		Marsden	Marsden.	1	1
116		Padiham	Padiham.		
117		Palace House	Burnley.		
		Rowley	Burnley.		
118	Hargreaves, Ashworth and Co.	Baxenden	Accrington.		
119		Hole in band.			
		Victoria	Baxenden.		
		Wood Nook	Accrington.		
		Cat Hole	Broad Oak, Accrington.		
120	Ditto	Rossendale	Newchurch.		
121		Brex	Lower Whitwell Bottom.		
122		Dean	Water.		
123		Foxhill	Middle Whitwell Bottom.		
124		Grime Bridge	Ditto.		
125		Scar End.			
126		Meadows	Bacup.		
127		Old Clough	Ditto.		
128		Swinshaw	Crawshaw Booth.		
		Stacksteads	Stacksteads.		
129	Haugh Hey Company	Haugh Hey	Rochdale.		
130	John Haworth	Cheesden Bar and Ridgy Close.	Bury.		
131	Zech. and James Howarth	Woodhouse Lane	Rochdale.		
132	Heskin Hall Company	Heskin	Chorley.		
133 134	Hulton Company	Hulton and Hulton Park	Bolton	2	2
135	Executors of J. S. Jennings	Crook	Wardle, Rochdale.		
136	Johnson and Livesey	Bradford	Manchester.		
137	Richard Kay	Meadow Head	Wolstenholme, Rochdale.		
138	Kershaw Brothers	Longley Hey	Littleborough.		

List of the Owners and Collieries in the Manchester District, &c.—*continued.*

Number.	Owners.	Colliery.	Address.	Accidents.	Deaths.
139	Andrew Knowles and Sons	-	Pendlebury, Manchester.		
140		Agecroft	Pendlebury.		
141		Clifton Hall	Clifton.		
142		Clifton Moss	Ditto	1	1
143		Pendlebury	Pendlebury	2	2
		Pendleton	Pendleton	1	1
144	Ditto	Lever	Little Lever, Bolton.		
145		Farnworth Bridge	Little Lever.		
146		Fearneyside	Ditto.		
147		Foggs	Darcy Lever.		
		Rivin	Little Lever.		
148	Ditto	Sharples	Bolton.		
149	Robert Knowles and Co.	Cleggswood	Littleborough.		
150 151	Knowles and Hall	Radcliffe and Banktop	Radcliffe, Manchester.		
152	Knowles and Stott	Stoneclough	Near Manchester.		
153		Little Hey.			
154		Ringleyfold.	-	1	1
		Singingclough.			
155	A. and W. Law	Lydgate	Littleborough.		
156	Executors of James I. Law	Greave New	Bacup.		
157	Samuel Leather	Dootson and Vauze	Blackrod, Chorley.		
158	Robt. Lees	Pasture Bottom New Line and Old Hey.	Bacup.		
159	Leeses and Booth	Fairbottom	Ashton-under-Lyne.		
160		Broad Oak.			
161		Hartshead.			
162		Heys.	-	1	1
163		Nelson and Rocher.			
		Woodpark.			
164	Lees and Co.	Greenacres	Oldham.		
165 166	Leeses, Jones and Co.	Holebottom and Rhodes Bank.	Ditto.		
167	Lees and Mayall	Little Mine	Greenacres Moor.		
168	Leigh and Bradbury	Broomstair	Denton, Manchester.		
169	Ditto	Clayton	Clayton, Manchester	1	1
170	Limehurst Company	Limehurst	Ashton-under-Lyne.		
171	Lomax, Dearden and Co.	Smallbridge	Rochdale.		
172	John Lomax and Co.	Rowley Moor and Old Link.	Ditto.		
173	John and Nathl. Longworth	Brinsop	Westhoughton, Bolton.		
174	John Lord and Co.	Deansgreave	Bacup.		
175	Samuel Lord	Scoutwood	Wardle, Rochdale.		
176	Samuel Lord and Brothers	Bamford Closes and Know Hill.	Wolstenholme, Rochdale.		
177	Lords Fields Company	Lords Fields	Ashton-under-Lyne	2	2
178	Mrs. Ann Maden	Hogshead	Bacup.		
179	Messrs. Marland	Bower	Hollinwood, Manchester	1	1
180	George Maxwell	Greave Clough	Bacup.		
181	Adam Mason	Winter Hill	Horwich, Bolton.		
182	Mayall, Leach and Seddon	Lower Moor	Oldham.		
183	George Mellodew	Hodgeclough	Oldham.		
184	James Mills	Lower House	Wardle, Rochdale.		
185	E. D. Milnes and Brother	Cob House	Birtle, Bury.		
186	Moscrop Brothers	Red Lumb	Wolstenholme, Rochdale.		
187	Peter Nightingale and Co.	Mesne Lea	Worsley	1	1
188	Norley Hall Company	Coppull Hall	Coppull, Chorley.		
189	Oldham, Middleton and Rochdale Company (Limited)	Edge Lane	Oldham.		
190		Bankhouse and Sholver	Crompton, Oldham.		
191		Boarshaw and Hopwood	Middleton.		
192		Hanging Chadder and Low Crompton.	Rochdale.		
193		Hartford	Oldham.		
194		Jubilee and Park	Crompton.		
		Lee and Robin Hill	Chadderton and Oldham	1	1
195	John Parkinson Parke	Withnell	Chorley.		
196	William Thornton Parks	Elton	Bury.		
197	Andrew Peake	Wildersmoor	Horwich, Bolton.		
198	William Pickup	Princess and Marsh House.	Over Darwen.		
199	Joseph Place	Hoddlesden	Over Darwen	2	2
200	John Price and Co.	New Fields	Horwich, Bolton.		
201	Rake Firebrick Company	Rake	Littleborough.		
202	Thomas Ramsbottom and Sons	Birtle Dean	Birtle, Bury.		

List of the Owners and Collieries in the Manchester District, &c.—*continued.*

Number.	Owners.	Colliery.	Address.	Accidents.	Deaths.
203	William Ramsden	Shakerley	Tyldesley.		
204	Ralph Rawstron	Bridge Mills	Whitworth, Rochdale.		
205	Ditto.	Old Clap Gate	Bagslate, Rochdale.		
206	Samuel Riley and Co.	Hurst Knowl	Ashton-under-Lyne.		
207	Riley and Holding	Holebottom	Accrington.		
208	John Rosbottom and Sons	Rawlinson	Heath Charnock, Chorley.		
209	James and William Roscoe	New Watergate and Peel Hall.	Little Hulton, Bolton.		
210	Roscow and Lord	Chadwick Hall	Rochdale	1	1
211	Ditto	Crow Nest	Milnrow, Rochdale	1	1
212	Ditto	Seedfield	Bury.		
213	Ditto	Stonehill	Farnworth.		
214	Rylands and Sons	Cockey Moor	Near Bolton.		
215	Sagar and McIntosh	Altham	Burnley.		
216	Ambrose Schofield	Knotthill Clough	Shawforth, Rochdale.		
217	Jethro Scowcroft	Tonge	Bolton.		
218	Samuel Scowcroft	Kearsley	Bolton	1	1
219	Ditto	Rosehill	Burnden, Bolton.		
220	John Seddon	Top o'-th'-Meadow	Darcy Lever, Bolton.		
221	Sharratt and Barker	Royal Charter	Charnock Richard, Chorley.		
222	Thomas Shaw and Sons	Haughton and Haughton Green.	Near Manchester.		
223	Sheep Bank Company	Sheepbank	Littleborough.		
224	Shorey Bank Company	Shorey Bank	Over Darwen.		
225	Eccles Shorrock Brothers and Co.	Dogshaw	Over Darwen.		
226	James Shorrock	Lower Barn	Over Darwen.		
227	Thomas Simpson	Lower Darwen	Blackburn.		
228	Thomas Simpson and Co.	Oswaldtwistle	Accrington		
229		Belthorn.			
230		Broadfield and Duckworth Hall.	-	1	1
231		Mossfield.			
232		Stanhill.			
233	John Smith, jun., and Co.	Great Lever Works	Bolton.		
234	Smithson and Butterworth	Hudclough	Facit, Rochdale.		
235	John Speakman	Broadfield	Westleigh.		
236	Executors of John Stanley	Moston	Near Manchester.		
237	James Stott	Unity Brook	Kearsley, Bolton.		
	Richard and William Stott	-	Rochdale.		
238		Ashworth	Heywood.		
239		Tunshill and Rough Bank	Milnrow.		
			-	1	2
240	Stott, Bamford and Co.	Birch Hey and Middlewood.	Wardle, Rochdale.		
241	Stott and Pickstone	Stand Lane and Whitefield.	Radcliffe, Manchester.		
242					
243	Stott and Schofield	Dearnley	Rochdale.		
244	James Taylor	New Barn	Bacup.		
245	Thomas Temperley	Clough Head	Todmorden.		
246	Tetlow, Lees, and Kershaw	Light Owlers and Sladen Mills.	Littleborough.		
247	Townsend and Co.	Britannia	Bacup.		
248		Greave.			
249		High Houses and Sharneyford.			
250					
251	Turton Moor Company	Turton Moor	Bolton.		
252	Samuel Tweedale	Tonnacliffe	Rochdale.		
253	Jacob Tweedale and Sons	Healey Hall Bottoms	Rochdale.		
254	Tyldesley Company	Tyldesley and Shakerley	Tyldsley.		
255					
256	Eli Walsh	Heyfold	Over Darwen.		
257	Thomas Whaley	Blackrod	Chorley.		
258	Thomas Whittle	Marklands	Blackrod, Chorley.		
259	Thomas and William Whittle	Duxbury and Chorley	Chorley.		
260	Wigan Coal and Iron Company (Limited.)	Westleigh	Westleigh.		
261	Edward Wilson	Farnworth	Bolton.		
262	John Sutcliffe Witham	Hapton	Burnley.		
263	John Woodhead	Intake	Waterfoot.		
264	William Woods and Son	Scot Lane	Blackrod, Chorley.		
265	John Wright	Bank	Little Hulton, Bolton	1	8
			Total	58	69

LIST of the FATAL COLLIERY ACCIDENTS and LOSS OF LIFE arising therefrom in the NORTH and EAST LANCASHIRE or MANCHESTER DISTRICT, under Mr. DICKINSON'S Inspection, during the Year 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Jan. 8	1	Bower	Hollinwood	Messrs. Marland	William Beswick	Miner	37	Roof falling upon him whilst he was setting couplings for support.	–	1	–	–	–
„ 9	2	Astley and Tyldesley.	Tyldesley	Astley and Tyldesley Coal and Salt Co. (Limited).	Edward Pilkington	Boy	14	Run over on the tramroad	–	–	–	–	1
„ „	3	Kingley Fold	Stoneclough	Knowles and Stott	John Riley	Miner	19	Roof falling in the Cannel mine	–	1	–	–	–
„ „	4	Bardsley	Ashton-under-Lyne	Bardsley Company	William Jacques	Waggoner	10	Died suddenly, apparently from a waggon, pushed by two persons, running against him.	–	–	–	1	–
„ 17	5	Bradley Fold	Little Lever	Thomas Fletcher	Robert Taylor	Waggon trimmer.	50	Caught between the wall and a waggon.	–	–	–	–	1
„ 18	6	Denton	Denton	Trustees of the late Ellis Fletcher.	John Handford	Miner	46	Top coal falling in the Big mine	–	1	–	–	–
Feb. 1	7	Heys	Ashton-under-Lyne	Leeses and Booth	John Taylor	Furnace man	64	Crushed by the cage ascending as he was getting in without the signal being given. The engineman was running the ropes, to see if all was right before winding men.	–	–	1	–	–
„ 2	8	How Bridge	Atherton	John Fletcher and others	James Hatton	Waggoner	16	Coal and earth falling upon him as he was filling a tub in the 7-feet mine, Volunteer pit.	–	1	–	–	–
„ 9	9	Denton	Denton	Trustees of the late Ellis Fletcher.	James Downing	Miner	20	Top coal falling in the Big mine	–	1	–	–	–
Mar. 7	10	Park Hall	Blackrod	Arley Main Company	Charles Haworth	Resident Manager.	21	Falling in front of a coal waggon, in motion on the inclined plane; died 22nd.	–	–	–	–	1
„ 10	11	Brandwood Moor	Waterfoot	James Brearley and Son	Adam Butterworth	Miner	36	Stone falling from the roof	–	1	–	–	–
„ 21	12	Hulton Chain Pit.	Westhoughton	Hulton Colliery Company	Richard Hampson	Dayman	61	Crushed on a level out of the engine plane by a train of waggons, the front draw bar having broken on going up.	–	–	–	1	–
„ 26	13	Kearsley	Kearsley	Samuel Scowcroft	John Rothwell	Miner	31	Roof falling in the Doe mine	–	1	–	–	–
„ 28	14	Pendlebury	Pendlebury	Andrew Knowles and Sons	John Knight	Ditto	44	Roof falling in the Shuttle mine as he was getting coal.	–	1	–	–	–

List of Fatal Colliery Accidents.—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. April 6	15	Buss	Clifton	Trustees of the late Ellis Fletcher.	Thos. Wolstencroft	Miner	47	Coal falling from between two breaks in the Rams mine.	–	1	–	–	–
„ 17	16	Lords fields	Ashton-under-Lyne	Lords fields Co.	Samuel Dawson	Waggoner	17	Explosion of fire-damp in the Roger mine.	1	–	–	–	–
„ 26	17	Towneley	Burnley	Brooks and Pickup	James Sagar Henry Fort	Miner Engine tender	37 20	A portable steam boiler with engine attached bursting.	–	–	–	–	2
„ 28	18	Clifton Moss	Clifton	Andrew Knowles & Sons	Thomas Rothwell	Dayman	—	Roof coal falling in the Doe mine. It was on the move, and he was attempting to set a chock before waiting until it had settled.	–	1	–	–	–
May 2	19	Lee	Chadderton	Oldham, Middleton, and Rochdale Co., Limited.	John Farron	Miner	62	Roof falling. Died 25th.	–	1	–	–	–
„ 10	20	Arley Hall New	Blackrod	James Gidlow	Wm. Haughton	Sinker	—	A shot, which had missed fire, exploding as he (contrary to orders) was drilling it out. He had water in the hole.	–	–	–	1	–
„ 15	21	Wharton	Little Hulton	Francis Charlton	James Eckersley	Hooker-on	17	Falling down the shaft from the Five Quarters mouthing. He had just gone down from the surface, and, apparently before getting what is called his eyesight, he in some way fell out.	–	–	1	–	–
„ „	22	Cornfield	Padiham	Executors of J. Hargreaves	Ezra Riley	Jinney tender	9	Caught between waggons at the first angle in the jinney or chain road to Padiham.	–	–	–	–	1
„ 18	23	Black Moss	Radcliffe	Thomas Fletcher	John Massey	Miner	19	Roof, which sounded solid, falling where he was working with his father in the 3 yards mine.	–	1	–	–	–
„ „	24	Spindle Point	Kearsley	Trustees of the late Ellis Fletcher.	John Kay	Dayman	—	Crushed by the cage whilst about to ascend from the Trencherbone mouthing. Others were in the cage ascending from the Cannel mine below, and some misunderstanding arose on the cage being unexpectedly stopped.	–	–	1	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. May 22	25	Spindle Point -	Kearsley - -	Trustees of the late Ellis Fletcher.	John Holt - -	Miner -	54	Roof falling in a bay where he was at work in the Trencherbone mine.	–	1	–	–	–
„ 23	26	Bardsley -	Ashton-under-Lyne -	Bardsley Co. - -	Henry Cudworth -	Ditto -	—	Roof falling in the Old mine whilst holing.	–	1	–	–	–
„ 28	27	Duckworth -	Oswaldtwistle - -	Thomas Simpson and Co.	James Duerden -	Ditto -	20	Roof falling whilst cutting through a pillar.	–	1	–	–	–
June 2	28	Springfield -	Welch Whittle -	James Darlington -	Elisha Whittle -	Sinker -	42	A piece of wood which he had left upon a horse tree in the shaft falling upon him.	–	–	1	–	–
„ 12	29	Welch Whittle	Ditto - - -	Ditto - - -	Andrew Robinson	Engineman	—	Capstan rope breaking whilst 27 cwt. of steam pipes were attached. He was knocked off a horse tree in the shaft.	–	–	1	–	–
„ 21	30	Mesne Lea -	Worsley - -	Peter Nightingale and Co.	John Martin -	Banksman -	61	Falling off the pit Hill at the loading wall.	–	–	–	–	1
„ 23	31	Rough Bank -	Milnrow - - -	Richard Stott and Son -	John Clegg - James Clegg -	Miner - Waggoner -	57 16	Inundation of water from old workings.	–	–	–	2	–
July 18	32	Chadwick Hall	Rochdale - -	Roscow and Lord - -	Robert Brierley -	Miner -	28	Injured by roof falling. Died 29th	–	1	–	–	–
„ 21	33	Honeywell Lane	Oldham - - -	Booth and Marland -	James Ainsworth	Ditto -	48	Roof stone falling in the Great mine	–	1	–	–	–
„ 23	34	Pendleton -	Manchester - -	Andrew Knowles & Sons	James Gerrard -	Dayman -	18	Roof falling whilst taking out chocks and props in the Rams mine.	–	1	–	–	–
„ 25	35	Cliviger -	Burnley - -	Cliviger Co. - -	Thomas Alderson Jos. Ion - - James Carlisle -	Fireman - Miner - Ditto -	39 26 22	Suffocation by gas from a part of the mine which had taken fire at an underground steam boiler. The gas was that known as white-damp, being in this instance sulphuretted hydrogen. It neither extinguished the lights like choke-damp, nor exploded like fire-damp.	–	–	–	3	–
Aug. 14	36	Clayton -	Manchester -	Leigh and Bradbury -	Thomas Johnson -	Ditto -	40	Explosion of fire-damp. Died 20th.	1	–	–	–	–
„ 23	37	Westleigh -	Westleigh - -	James Diggle - -	John French -	Ditto -	20	Roof coal which he was preparing to get down falling upon him in the 7 feet mine.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Sept. 2	38	Crow Nest	Milnrow	Roscow and Lord	Samuel Midgley	Furnace-man	56	Falling down the shaft from the furnace mouthing, which was without the required fencing.	–	–	1	–	–
,, 4	39	Pendlebury	Pendlebury	Andrew Knowles and Sons	Abraham Huslam	Miner	—	Coal and earth breaking through the props and falling upon him in his bay.	–	1	–	–	–
,, ,,	40	Albert	Westhoughton	John Gerrard	James Thomason	Ditto	26	Explosion of fire-damp in the yard mine. Died 11th.	1	–	–	–	–
,, 8	41	Buckley Lane	Little Hulton	Bridgewater Trust	William Farnworth	Waggoner	15	Falling out of the cage whilst descending the shaft. Three other persons were in the cage, and it appeared that on passing a mouthing where there was a light he pressed against one of the others, and being pressed back he fell out.	–	–	1	–	–
,, 12	42	Hoddlesden	Over Darwen	Joseph Place	George Adcroft	Miner	69	Roof falling in an old place which was being cleared out.	–	1	–	–	–
,, 13	43	Bradley fold	Little Lever	Thomas Fletcher	John Ramsden	Waggoner	13	Crushed by a waggon which a miner accidently missed hooking at the top of a brow in the Doe mine.	–	–	–	1	–
Oct. 8	44	Burton Nook	Denton	Trustees of the late Ellis Fletcher.	Joseph Warr	Ditto	14	Crushed whilst getting into the cage to ascend. The signal had not been given back to show that all was right.	–	–	1	–	–
Nov. 1	45	Westleigh	Westleigh	James Diggle	John Shuttleworth	Hooker-on	23	A loaded waggon which he had sent up the engine brow becoming uncoupled ran back and crushed him at the hooking-on place.	–	–	–	1	–
,, 14	46	Linnyshaw	Worsley	Bridgewater Trust	Simeon Atkinson	Taker-off	12	Run over by two waggons on a self-acting plane. The waggons being the front ones of a train, had got off the rails, and he and another boy, without waiting for the man to arrive from the top of the plane, put them on again without noticing that they were uncoupled.	–	–	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Nov. 15	47	Chanters	Atherton	John Fletcher and others	Geo. Hall	Furnaceman	46	Crushed by the cage descending whilst he was getting out at the top of the shaft. One more than the allowed number had got in, and he was getting out to make it right, but the signal to go on had been given.	–	–	1	–	–
„ 16	48	Marsden	Burnley	Exors. of J. Hargreaves	Thos. Brown	Blacksmith	35	Caught by a strap which turns the fan for the smiths' fires. He had just put it on to the pulley, and then apparently supposing all to be right had caused the engine to be started.	–	–	–	–	1
„ 24	49	Lords Fields	Ashton-under-Lyne	Lords Fields Co.	Joshua Goddard	Miner	40	Roof falling in his working place in the Great Mine.	–	1	–	–	–
„ 30	50	Hulton Chain pit.	Westhoughton	Hulton Co.	William Henry Walton.	Waggoner	14	Stone falling from the roof of the waggon road, in the Yard Mine.	–	1	–	–	–
„ „	51	Breightmet	Bolton	Thomas Fletcher	Andw. Platt	Miner	49	Clod falling in his place of work in the Cannel Mine.	–	1	–	–	–
Dec. 4	52	Breightmet	Ditto	James Hardcastle	David Partington	Ditto	27	Explosion of fire-damp. Died 6th.	1	–	–	–	–
„ 10	53	Bank	Little Hulton	John Wright	Peter Swindells	Ditto	27	Explosion of fire-damp in the west workings of the Cannel Mine.	8	–	–	–	–
					John Swindells	Ditto	21						
					James Grundy	Ditto	21						
					Levi Rushton	Ditto	20						
					John Glynn	Waggoner	15						
					Thos. Robt. Nuttall.	Miner	21						
					Wm. Swindells	Ditto	30						
					Saml. Coucill	Waggoner	12						
„ 11	54	Habergham	Burnley	Exors. of J. Hargreaves	James Walton	Oiler	12	Crushed by a waggon turnover falling upon him.	–	–	–	–	1

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Dec. 15	55	Wet Earth	Clifton	Trustees of the late Ellis Fletcher.	James Jones	Waggoner	12	An empty waggon which he had hooked on becoming disconnected and running against him down the Jig Brow.	–	–	–	1	–
,, 19	56	Westleigh, 7 feet	Westleigh	James Diggle	Wm. Smith	Miner	—	Earth falling from the face. Died January 16th in Manchester Infirmary.	–	1	–	–	–
,, 21	57	Spindlepoint	Kearsley	Trustees of the late Ellis Fletcher.	Watkin Lord	Pony Driver	12	The front part of a loaded train of waggons which he was seated upon driving, upsetting upon him.	–	–	–	1	–
,, 29	58	Hoddlesden	Over Darwen	Joseph Place	Joseph Walsh	Waggoner	28	Explosion of fire-damp. Died 23rd January.	1	–	–	–	–
								Total, 58 fatal accidents, and 69 deaths	13	25	9	13	9

I have, &c.
(Signed) JOSEPH DICKINSON.

The Right. Hon. S. H. Walpole, M.P.,
Principal Secretary of State, Whitehall.

Mr. Higson's Report.

REPORT of the WORKING of the MINES INSPECTION ACT (23 & 24 Vict. c. 151.) in the WEST LANCASHIRE AND NORTH WALES DISTRICT, during the Year ended 31st December 1866.—By PETER HIGSON, Esq.

SIR, Manchester, February 28th, 1867.

I HAVE the honour to transmit the following Report of my proceedings as Inspector of the Mines of West Lancashire and North Wales, in the year 1866.

The fatal casualties of the year 1866 will be long held in painful recollection. They will fill a remarkable and melancholy page in many of the Inspectors' Reports. They will be remembered when other periods of time and eventful circumstances have ceased to hold possession of the memory, on account of the great and unprecedented loss of life which they have caused.

In this, as in many other districts, a greater number of lives were lost in and about the mines in the last, than in any previous year since I entered upon my duties as Inspector. In the district to which this Report particularly refers, the increase has been caused by two explosions of inflammable gas, or fire-damp:—one at High Brooks Colliery near Wigan, and the other at Garswood Park Colliery near St. Helen's, both of which will be herein-after more fully described. These explosions alone terminated the lives of 30 and 12 persons respectively. In addition thereto, 108 others of all ages, who were employed in and about the mines of coal and cannel only, were killed, and one in an ironstone mine by a fall of stone; amounting in the aggregate to the loss of 151 persons. Although this is an increase on the loss of life in the previous year of 33, the number of fatal casualties were more by six, only.

This great and deplorable loss of life has not in all cases been the result of what are often miscalled accidents, although there are many in the list hereunto annexed that may be justly placed under that head, but of mismanagement, disregarding established regulations, insubordination, and reckless proceedings on the part of the work-people.

The employment of persons not accustomed to underground labour has in a great measure been forced upon mine-owners by the strict observance of the men to the rules and regulations of the Trade Union, by which the work-people have now obtained higher wages than formerly for doing less work. For the purpose, therefore, of maintaining the out-turn of coal, and of supplying the gradually increasing demand, employment in one capacity or another has been found for almost every applicant. It is, however, much to be regretted, that while the improved circumstances of the miners is conspicuous throughout the district, they are not as a rule so careful of themselves nor so controllable as they were in less prosperous times.

Upon carefully analysing the following list of lives lost, I find that 40 occurred through their own disobedience and carelessness; 52 by accidents beyond control; and 59 under circumstances of a different character, many of which I am of opinion might by better management have been prevented. The difficulties with which mine-owners and managers have frequently to contend, are not easy to explain. They are found in various shapes, and often turn up when least expected. In making explorations through faults, and in broken and unworkable ground, a large and in many places an almost hopeless outlay has to be incurred in searching for the mines, without perceiving even a trace of anything to give encouragement. Operations of this kind are, as may be easily imagined, often begun and carried on in a parsimonious manner, so that upon reaching the mine or any point at which deleterious gas happens to be freely emitted, the preparations for safety are found inadequate. From this and many other causes, loss of life is of more frequent occurrence in working mines of that description than it is in those mines wherein the strata are continuous or unbroken. The former prevails over a large portion of my district, which, together with the character of the mines, renders the general use of gunpowder indispensable; and as explosive gas is largely emitted, blasting either stone or coal is always attended with personal risk, and demands the most careful supervision.

Many lives are lost annually by blasting alone; by the shot going off when being charged or drawn, by being approached too soon when it is supposed to have missed fire, but subsequently explodes. The special rules, which provide for the guidance of the work-people in all such cases, are clear and comprehensive, but not sufficiently obeyed even by the best and most experienced workmen. Breaches of the special rules are seldom made known to me until a fatal casualty happens, and they may in a great measure escape the notice of the managers also, in consequence of the works being carried on in so many separate places. It should, however, be distinctly remembered by everybody in and about a mine, that omitting to obey one of these rules is like trusting one's life on a chain in which there is a defective link.

More attention is now being given to propping and spragging than heretofore, and the loss of life from falls of roof and from the sides are on the decrease; and it is still necessary that the managers and under-lookers should cause the roof and sides or face of the mine to be in all cases more systematically secured, in which the men also, as it would be for their own safety, should willingly co-operate.

The great loss of life which has taken place during the year on the works upon the surface, in shafts, and by trams and tubs below ground in places where every necessary provision for safety had been previously made, is most remarkable. It is evidence of the reckless and inattentive acts of the deceased, and shows most clearly that unless work-people can be impressed with the belief that they possess the means of avoiding danger, and that they must use it on all occasions, such serious casualties will continue to happen.

Mining under any circumstances is always attended with danger, more perhaps than any other occupation which a labourer follows. It surrounds the miner while he is at work, and it is ever present when he descends and ascends the shaft. Yet of all others he seems to think the least about it. He sees or hears of explosions destroying hundreds at a time; of falls of roof upon his own fellow workmen or assistants; of inburst of water inundating a mine, and shutting up in a watery tomb every living soul that happened to be therein; of ropes breaking while suspending a living freight; of boilers bursting and machinery breaking and causing the loss of many a valuable life; and still he pursues his daily calling, and relies for all necessary protection on those who are in charge of the works. On finding anything wrong in his place of work he may perhaps mention it to the under-looker or fireman when he meets with them, but he seldom makes such communications to the owner or principal agent, and never to the Inspector of Mines.

I have received a few letters during the year from the miners' agents, directing my attention to certain mines in my district which I have sometimes found in a dangerous state; but I cannot now recollect a single instance of having received any information from a workman, although I am now pretty generally known throughout the country, and those who have not my address can easily obtain it. I have often regretted this omission, on the grounds that the least intimation of danger from any one, either employer or employed, would have drawn me at once to the place, frequently in time to have prevented loss of life; I was, therefore, much surprised on being informed that the miners had caused a petition to be presented to the last Parliament for an investigation of their grievances, in which defective ventilation of the mines generally was made an important ground of complaint.

Before the Committee of honourable members, which for that purpose was subsequently appointed, many unwarranted statements were made. To such an extent does the feeling of each party appear to have prevailed,—one flatly contradicting the positive assertions of the other,—that the honourable Committee, as one may naturally conclude, were unable to deduce therefrom any real practical result.

Upon reading the evidence I was particularly struck with the manner in which some of the miners' agents spoke of the inefficiency of inspection, and of the Inspectors also, and more particularly with the remarks of Robert Woodward, of Haydock, near St. Helen's, in Lancashire. In page 83 of the Minutes laid before Parliament, he there states, that he has resided in Haydock 12 years, and worked in the mines there, and at an adjoining colliery called Laffak; that I am the inspector of the district, and that during the whole of that time he has only seen me on one occasion, when I was going down a pit. As to whether he was constantly there, or he had heard or inquired of my subsequent visits, he does not say. Now, as at the time this statement was made, I had only been an Inspector ten and a half years, and as I had made more than fifty visits of inspection to the mines to which he refers, besides having attended as many inquests in the same locality, there appears to be something wanting before his account can be justly admitted as proper evidence. The opportunity of giving this explanation to the Committee did not occur, and although to many it may appear unnecessary, I cannot suppress the feeling that I am fully justified in laying this information before you, and also expressing my belief that the reflections cast upon many others are based upon as false premises as those I have now exposed. That there are still many mines inadequately ventilated, no one, I believe, will venture to deny; and although recent events may cause suspicion to rest upon all, to a large majority it cannot fairly attach. Immense changes and improvements have taken place throughout this district during the last ten years, not only in the system or mode of working the mines, on which, in the main, the very ground work of the safety of the work-people depends, but in the preparations and supervision also of that and every other department of the works above and below ground. Yet it cannot be said that many collieries are in what may be called a perfect state; and this occurs in consequence of their unfixed and constantly altering character, by the working places of the men being daily carried outwards from or backwards towards the eye of the pit. The great and rapid increase of trade also has brought overlookers into situations of greater responsibility than they are able to bear the demand for competent persons having exceeded the supply, while with young and inexperienced owners the best candidates for an appointment are not always successful. Almost, if not all, explosions in mines are, and should always be considered preventable; at times, however, when a crisis occurs, the best efforts may fail, and the result prove a misadventure. Their origin may in almost every instance be traced to some defect, either conspicuous or remote, in the ventilation, the mode in which it is produced, or in the general arrangements and system of working the mine. Persons of limited experience often incur great risk, and cause many casualties, by allowing the ventilation to depend upon doors and brattice, and the air to flow through all the works of the mine in one current; instead of dividing the workings into distinct and separate districts, and drawing from the main inbye stream a sufficient supply of pure air for each, every place is connected, and in the event of a slight explosion occurring, exposed, if not to the actual blast, to the after-damp which follows, which is almost as destructive. It is, therefore, manifest that the workings of every mine should be divided into proper districts, and that each should be ventilated by a separate split of air, which on passing thereout should be conducted to the upcast pit.

In some mines apparently good ventilation has been overpowered by a sudden outburst of gas, but such a thing very rarely takes place. Yet explosions which happen through bad ventilation are often attributed to a sudden outburst. Their origin, however, in most cases, as well as that of many of the casualties of the year to which these observations refer, may be traced to the mode in which the mine was being worked at the time they occurred.

If in all cases narrow or strait work were to be driven from the eye of the pit to the boundary of the mine intended to be got, and substantial pillars of coal left in the intervening spaces to support the underground roads, a considerable portion of the gas would be gradually and quietly drained away before the time arrived for removing the pillars; when the main roads reached the boundary, pillar working might commence, in such a manner as circumstances might render most desirable. Beginning at the extremity in every instance, and working backwards, or towards the pit, thereby leaving the goaf behind, which may always be kept safe by passing a strong current of air along the edge thereof. It is now more than 30 years since I first adopted this mode of working in some of the mines, of which I was then the manager, and which has I find been continued to the present time with success. The system recently practised in the Wigan district, which still exists in some of the old collieries in North Wales, prevailed throughout Lancashire at an earlier period. It consists of taking out too large a proportion of the mine at the first working, or when opening out leaving inadequate pillars of coal for the second or homeward working the removal of which is always attended with increased risk. In Lancashire the first operation is called drifting, the second pillar working. In North Wales they are respectively termed wicket and pillar.

The final success of mining depends more upon the skill and judgment used in first laying out the works than most people seem to think, and in almost every instance success in trade produces in proportion to the workpeople greater or less protection: around a well arranged and prosperous colliery I find, as a rule, a more settled and intelligent population, and there are fewer accidents than there are in those places which are less fortunate in business. If then people could only be induced to employ competent mining engineers and viewers to lay out their works, and make a periodical inspection of the same, casualties of all kinds would no doubt be diminished in number, and much loss of life be prevented. As it is not improbable that the annual sacrifice of life in and about mines, may have contributed largely towards the present limited supply of labour, it seems to me a question to which mine owners should give their serious attention.

I had the honour to report during the last session the death of Ann Hampson, a little girl of the age of 12 years, who was killed by a railway truck above ground at the Moss

House Colliery in Rainford. As my report was laid before Parliament, it may be unnecessary now to refer to it, except so far as to observe, that the employment of a child of such tender age was not under the circumstances a violation of the law, and to give expression to my thorough disapproval of the employment of females on out-door labour, before they have attained the age of 15 years.

I do not concur in the views expressed by the miners' agents as to the desirability of prohibiting the employment of boys below ground until they have attained the age of 12 or 14 years. I approve of the 2nd section of the Act 23 and 24 Vict., cap. 151, in its present shape. It contains encouraging provisions, which afford considerable relief to widows who have large families to bring up. If boys were allowed to idle until they were 14 years of age, only a small proportion of the number would make good and industrious workmen. I believe that section of the above Act to be working well, and it seems to me that its provisions will ultimately become strictly observed. I have formed this opinion on the preparations that have of late years been made for the education of young people in my district, and on the number that can now read and write. I was employed in the erection of, I believe, the first school in Lancashire, that was provided expressly for the education of the children of miners. It was built at Clifton, near Manchester, in the year 1836, at the expense of the trustees of the late Ellis Fletcher, Esquire, whose mines I then managed. The number of schools that have been since built and established, and the number of children that daily attend them, are too numerous to mention here. Such an inquiry would be found to contain matter of sufficient interest to form a separate report. Schools of all kinds are studded over the country, and thousands of children are now being taught, whose moral welfare in former times would have been ignored.

You will, no doubt, have been already informed that the recent explosions in mines have caused great sensation in the country. The casualty at the Oaks Colliery appears above all others to have made the deepest impression on the public, as that mine was under the supervision of one of the most able and trustworthy of our mining engineers; and, as it was stated at the inquest which was subsequently held on the dead, that an abundant supply of air was constantly passing through the workings, and that the best discipline was established and maintained, the result is not only astounding, but to some extent unaccountable. It has created a feverish feeling of alarm far and wide, and caused many proprietors to have their mines examined by competent viewers, while others are relying on an increased number of inspectors being appointed.

This excitement, so long as it lasts, may do some good, and if it could be steadily continued without another explosion, further legislation would be almost unnecessary. But, like all other things, it will soon pass away, and people will fall back into the old slough, and forget the painful lessons we have learned at such a serious cost.

A colliery explosion causing the death of several persons is a matter of sufficient importance for people to talk about: there are some who never fail to express their surprise that the inspector had not prevented it, and who at once conclude that he must have neglected his duty; others, among whom may be classed the miners' agents, complain that mines are not inspected as frequently as they should be, that there are not a sufficient number of inspectors to do the work efficiently, and that an additional number should be appointed; and a few persons have expressed as their belief that the present system is adequate, and that the inspectors of mines have no more work than they can do comfortably. Such opinions cannot, however, have been formed on correct data, and such only must be received as stray thoughts, which may lead to more mature deliberation on the subject.

If a correct estimate of the number of lives saved annually, and of other benefits hitherto derived from legislation on mining, could be made, it would not only show a most satisfactory result in the economy of life, but that much has been done in the way of clearing the ground of ignorance and prejudice, and in making preparations for and establishing an improved system, the full value of which will be realized in subsequent years.

During the year 1866, to which these pages refer, I have attended every important inquest; inspected all the mines in which loss of life has happened, and inquired into the cause thereof; inspected all mines described to me by letter or otherwise as being in any way dangerous; and the remainder of my time has been occupied in inspecting such mines as, from my previous knowledge and experience, I had reason to suppose were surrounded with more than an ordinary amount of risk.

I have not only found it impossible, but in some instances inexpedient, to make periodical inspections of mines; and although people may say, and believe, that if the present system is now proved to have been beneficial, inspection on a more extensive scale must necessarily be still more so, and that by increasing the number of inspectors, there ought to be a corresponding decrease of all accidents, and to a certain extent it might so happen; but if inspection were carried beyond a judicious limit a contrary effect might be produced; frequent inspection would in many instances cause the owners and managers of mines to rely too little on their own energy and skill, and too much on the inspector. Those who have the control of the works should have the responsibility also; but if the inspector were to make a weekly visit to a mine, he would find it difficult after a time to avoid that responsibility which his visits would naturally create. I think, however, an intermediate course might be safely steered, which would afford ample inspection without giving too much. If, therefore, it be intended to make further regulations, and enlarge the means of inspection, I am of opinion that the appointment of assistants to the present staff of inspectors, consisting of a number of young men of respectability and of good education, such as are annually passing an examination at the school of mines, or who have graduated at one of the universities, or who have served an apprenticeship as a viewer or mining engineer, who should act under the directions of his superior officer, would supply the necessary aid.

I have, &c.
PETER HIGSON.

The Right Hon. Spencer H. Walpole, M.P.,
Secretary of State, London.

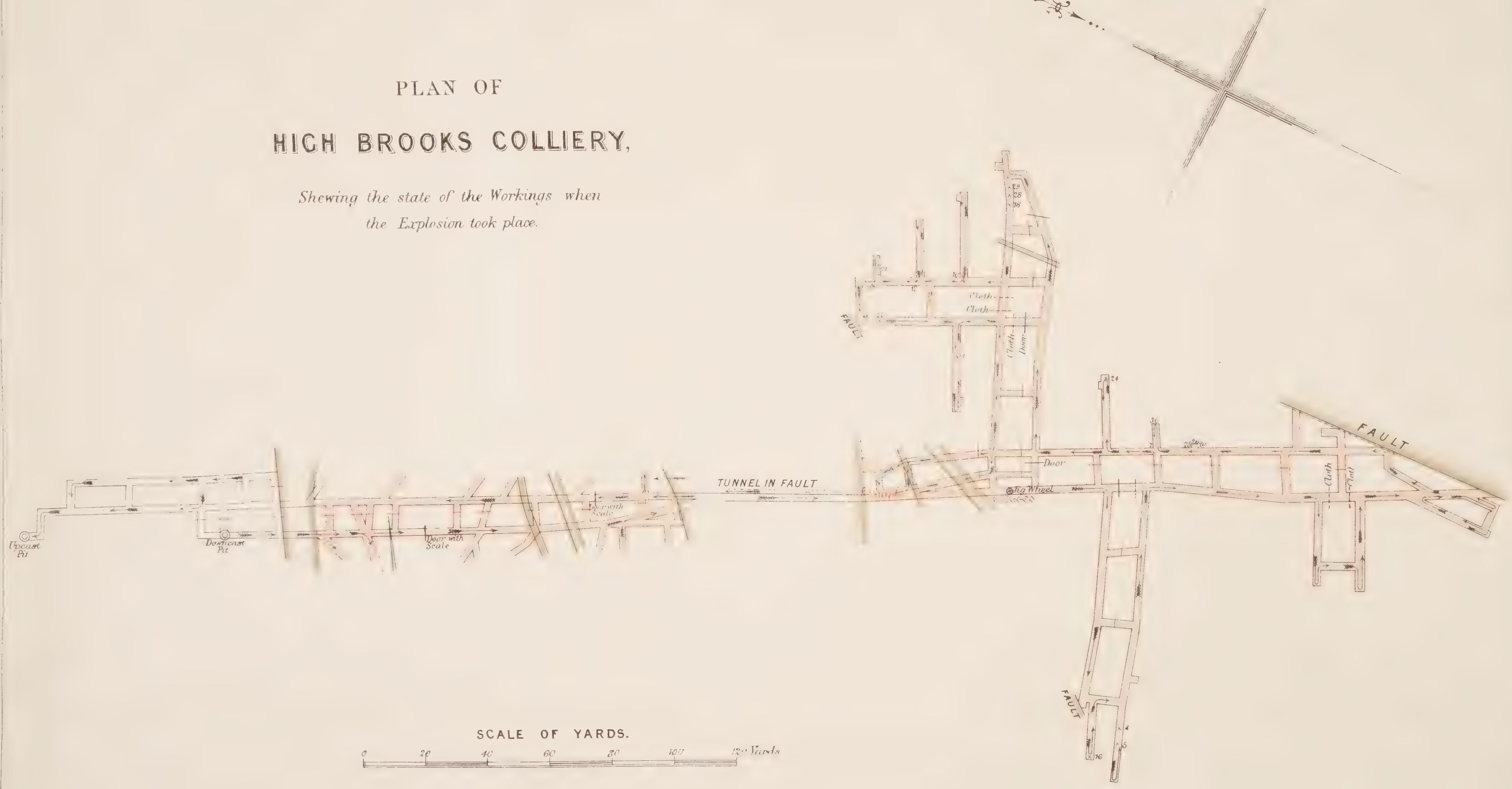
Explosions.

On the 23rd January an explosion of fire-damp took place in the Orrell four feet mine at the High Brooks Colliery near Wigan, which caused the death of 30 persons; the tracing hereunto annexed of the colliery plan shows the workings in which it happened, and the numbers marked thereon from 1 to 30 show the places where the deceased were found dead. This is the most fiery mine in the country, and in this particular spot it is very much broken by faults, so that these workings, which are of limited area, were being made, as the owners state, to explore the field. On being apprised of this calamity I left home to visit the mine at midnight, and upon arriving there I found that all the bodies, living and dead, had been got out, and that further operations were suspended. On the following day I made a careful inspection of the workings, and failed in my search for inflammable gas, but found after-damp more or less in nearly all the workings; this was prior to the ventilation being restored to anything like its former state. The effects of the explosion appeared most severe; brattice in some of the workings was burnt to ashes, and stoppings of great strength and thickness blown away, and the materials of which they were made scattered broadcast on the roads for a considerable distance at right angles to the openings in which they had previously been built; so that the whole of that little plot of mining ground was reduced to a complete ruin, from which the bodies of these unfortunate persons were recovered. Prior to my second visit of inspection a number of holes had been bored in the floor of the mine, to ascertain if there was any probability of a sudden issue of gas having escaped therefrom in consequence of the floor in many places having opened and risen considerably. At some of the holes gas issued and fired freely at the lamp, but at others nothing could be seen; nevertheless it was not unreasonable to conclude, having all the surrounding circumstances in view, that some gas might have escaped from that source and overpowered the ventilation, which at the time might only have been barely adequate to keep the workings apparently safe and clear. It consisted of one stream or current of air, which was conducted by brattice cloth and stoppings of bricks and debris through all the workings, from the end of the tunnel or main intake to the return air course. As this part of the mine has been suspended since the explosion, the works have not been completely restored to their former state, so that I have not, perhaps, yet obtained the exact quantity of air that would probably be going through the workings previously. I measured it on three separate visits to the mine, and obtained a maximum of 6,000 cubic feet of air per minute, or 200 cubic feet per minute, for each person in the mine. Mr. Clark, a mining engineer in the neighbourhood of the colliery, stated in his evidence before the coroner's jury that he had tested the ventilation also on one occasion, when it amounted to more than 9,000 cubic feet per minute. There were two shafts in use, and in one of two a good furnace, and the workings in question lay some distance therefrom, and were approached by two tunnels, which for a few feet at one point had been run together and then divided by a brick wall, which was blown down

PLAN OF

HIGH BROOKS COLLIERY,

Shewing the state of the Workings when the Explosion took place.


Upcast Pit
Downcast Pit
Door with Scale
Door with Scale
TUNNEL IN FAULT
Jig Wheel
Door
Cloth
Cloth
Cloth
Door
Cloth
Cloth
FAULT
FAULT
FAULT
SCALE OF YARDS.
0
20
40
60
80
100
120 Yards

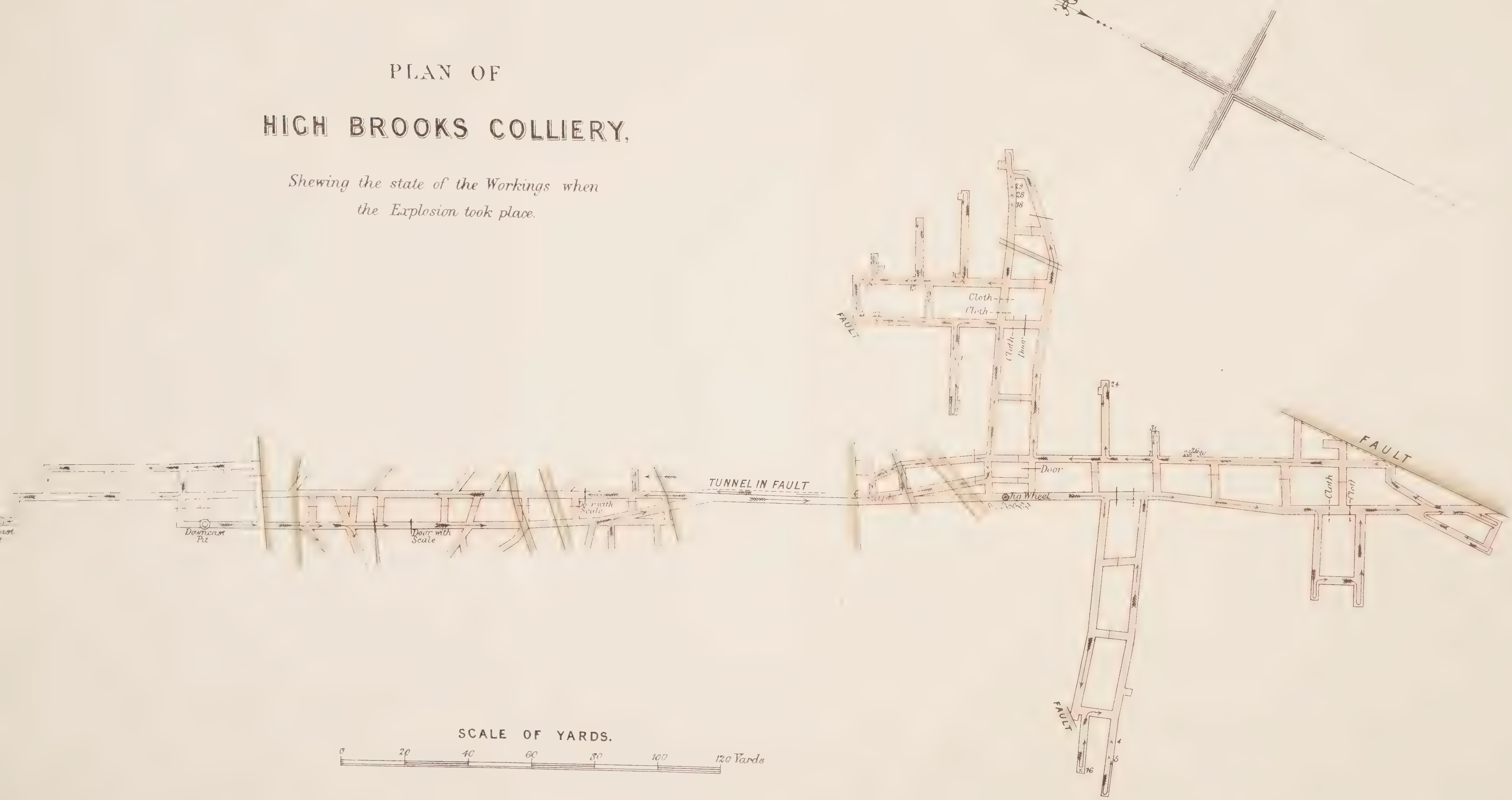
The numbers from 1 to 30 shew the places where the deceased were found.

Day & Son, Limited, Lith. London. W.C.

PLAN OF

HIGH BROOKS COLLIERY,

Shewing the state of the Workings when the Explosion took place.


FAULT
FAULT
FAULT
Cloth
Cloth
Cloth
Door
Door
TUNNEL IN FAULT
Door with Scale
Door with Scale
Downcast Pit
Wheel
Cloth
Cloth
24
SCALE OF YARDS.
0
20
40
60
80
100
120 Yards

The numbers from 1 to 30 shew the places where the deceased were found.

Day & Son, Limited, Lith. London. W. C.

by the explosion. The inquiry was extended over several days, and terminated in the jury finding "that the deceased persons had been killed accidentally and by misfortune, and not otherwise, and that no blame attached to any one." This was known to be a fiery mine, and no other lights than safety lamps were in use, which were all found securely locked. How then and by whom the gas was ignited, and whether its presence was caused by a sudden outburst, or whether it had been suffered to accumulate in some of the workings in which it was fired, or that the ventilation was made inadequate, and consequently broke down, must ever remain a mystery; though, as I have previously stated, it might appear safe to the fireman, and a slight issue of gas might make it inflammable.

Three explosions of gunpowder have happened during the year, causing the death of three persons. In each case loss of life has occurred in consequence of the deceased having more powder in the mine than he required for one day's use, and in not taking proper care of it.

On the 3rd March an explosion, causing the death of two persons, happened at the Brynn Moss Colliery, near Wigan. The deceased were working at a face of coal towards the rise of the Wigan four feet mine, on each side of which there was an upbrow containing gas. The fireman found the gas in making his morning inspection, but neglected to put up the usual signal of danger; after a time the gas backed upon them, and ignited at one of their naked lights. The fireman was severely censured by the jury, and then suspended from his work.

On the 12th March an explosion occurred in the main coal at the Nant Mawr Colliery, which caused the death of a man who was employed to put up some brattice to remove a small quantity of gas, which he must have ignited accidentally.

On the 4th May an explosion, which caused the death of 12 persons in the little Delf mine at the Garswood Park Colliery, appears to have happened in the following manner. One of the deceased persons, who was driving a cut through, down hill, between two of the upper levels, put a large quantity of coal therefrom into the level above, which prevented the ventilation reaching the end of the level, where some gas must have accumulated, inasmuch as the gas was ignited by the shot, which deceased fired evidently without first examining the place to see if it was clear. The shot hole pointed direct to the only spot where the gas could have lodged. I could not justly complain of the ventilation, but I expressed my opinion strongly against permitting colliers in fiery mines to fire their own shots: that, and the practice also of using mixed lights, should be finally abandoned.

On the 8th of May an explosion happened in a sinking pit at the Bromfield Colliery, near Mold, which caused the death of two men. A bore hole had been put down from the bottom of the shaft into a wicket in the mine below, to allow the water to run away to the pumps of the engine pit. Subsequently the pumping apparatus broke down, and as the water rose in the engine pit it filled the entrance to the mine, and thereby stopped the ventilation; and as gas accumulated in the workings it ascended the bore hole in the sinking pit, in which the deceased men were working with uncovered lights, at which it fired, and burned them so severely that they died of the wounds thereby inflicted.

On the 11th of May an explosion by which one man lost his life happened in the Brassey mine at the Westminster Colliery near Wrexham. Deceased was working in the return air course with an uncovered light, and the fireman thoughtlessly removed a body of gas (which a fall of roof had caused to accumulate in a wicket). The current of air carried the gas along undiluted to the place where deceased was working, and it exploded at his naked light.

On the 19th of July William Butterworth, a collier in the Wylva Colliery, went out of his own working place into one that was suspended, and having an open light in his hand he exploded a body of gas, which caused his death.

On the 18th of November an explosion took place in the Two Yards mine at the Westminster Colliery, by which Robert Evans, a charter master, lost his life. It appears he went into the goaf for some purpose or other, and there ignited the gas. His object in going there is supposed to have been for the purpose of seeing if it would be safe to gather stone for building pack walls. He was the charter master or contractor of the work, and had charge of the ventilation. This is one of the constant sources of risk attending the system of long wall working.

On the same day there happened an explosion at the Coppa Colliery near Mold, in consequence of the deceased firing a shot in the vicinity of explosive gas after, as it was stated, the fireman had told him not to do so.

He was very much blamed for allowing deceased to work there till such times as the gas had been removed, as required by the special rules.

The last explosion of the year occurred on the 12th of December at the Low Hall Colliery near Wigan, in the Wigan nine feet mine. Deceased had cut an upbrow a few feet only out of the main horse road, and within 100 yards of the pit eye, a little gas had collected there unknown to the deceased while he was at work, which he accidentally ignited, and the report of the explosion which led to his death was not heard by a fellow workman who was not more than half-a-dozen yards from the place at the time it happened.

Falls in Mines.

In the year 1865 there were 37 falls in mines, causing the death of 38 persons; in the year 1866 there were 34 falls, causing the death of 37 persons; the result of one being the death of three, and another of two persons, the rest being all single accidents; and a decrease of three in the number of falls, and of one in the loss of life.

In Shafts.

There were 19 separate casualties in the year 1865 by which 31 persons were killed. In the year 1866 there were 16 fatal casualties, which caused the death of 16 persons; so that in the year 1866 shaft accidents were fewer by three, and the number of lives lost by 15, than in the year 1865.

Miscellaneous Casualties underground.

There were 20 accidents under this head, causing the death of 22 persons, in the year 1865. In the year 1866 there were 21, and 21 deaths.

On the Surface.

In the year 1865 there were 15 accidents on the surface, by which 15 persons were killed. In the year 1866 there were 23, which resulted in the death of 23 persons.

Loss of life, therefore, from shaft accidents has diminished by 15, falls in mines by 1, and miscellaneous underground by 1. But there has been an increase of 42 from explosions, and of 8 on the surface, making a net increase of 33 deaths in the year.

I have applied by circular letter to every mine owner in my district for a return of the number of persons employed in and about the mines of coal, cannel, and ironstone, and the quantity of produce raised. Four mine owners only have omitted to make the return. Even this is much to be regretted, inasmuch as it prevents my being able to state that the annexed return is strictly accurate, nevertheless it may be relied upon as a near approximation to truth.

A great number of persons are employed aboveground in cleaning the coal for market; more, perhaps in proportion to the out-turn of coal than in other parts of the country, all of whom are included in the summary, and all loss of life that has occurred to such persons is returned in the following list.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS OF LIFE arising therefrom, in the WEST LANCASHIRE and NORTH WALES DISTRICT, during the Year ended December 31, 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Jan. 3	1	Rose Bridge	Wigan	John Grant Morriss	Joseph Barker	Underground Labourer.	34	Fall of roof, while drawing props	—	1	—	—	—
„ 10	2	Tryddyn	Mold	Flintshire Oil and Cannel Co.	Joseph Hellier	Engineman	—	Deceased fell into the wheels of the machinery above ground.	—	—	—	—	1
„ 11	3	Meadows pit	Haigh, Wigan	Wigan Coal and Iron Co.	Geo. Aspinall	Collier	40	A shot exploded before he could get out of the way.	—	—	—	1	—
„ 17	4	Ravenhead	St. Helen's	Bromilow, Haddock, & Co.	Jno. Hardman	Ditto	—	Fall of coal	—	1	—	—	—
„ 20	5	Holland	Wigan	Wigan Coal and Iron Co.	Joseph Nelson	Drawer	15	Ditto	—	1	—	—	—
„ 22	6	Prospect	Standish, Wigan	Ditto	Jno. Cratchley	Do.	13	Crushed by a tub in the mine	—	—	—	1	—
„ „	7	Pentre Saeson	Wrexham	Pentre Saeson Coal Co.	Jas. Rigby	Collier	—	The rope slipped off the drum whilst he was coming up the pit.	—	—	1	—	—
„ 23	8	Park Lane	Wigan	Mercer and Evans	John Saunders and 29 others.	—	—	An explosion of gas	30	—	—	—	—
„ 25	9	Springs	Ditto	Pearson and Knowles	Sam. Leigh	Collier	—	An explosion of powder	1	—	—	—	—
„ 31	10	Wern	Bagilt, Flintshire	Wern Colliery Co.	John Green	Do.	—	Fall of roof	—	1	—	—	—
Feb. 1	11	Little Mountain	Buckley, Mold	Little Mountain Coal Co.	James Hall	Sinker	—	Falling out of the tub in ascending a sinking pit.	—	—	1	—	—
„ 5	12	Ravenhead	St. Helen's	Bromilow, Haddock & Co.	William Whittaker	Blacksmith	70	Deceased was caught in the gearing which works the screen.	—	—	—	—	1
„ 7	13	Bickershaw	Wigan	Ackers, Whitley, & Co.	Charles Thorpe	Engineman	20	Ditto ditto ditto	—	—	—	—	1
„ 8	14	Hindley Green	Ditto	John Scowcrof & Co., Limited.	Thomas Rigby	Collier	42	An explosion of gunpowder	1	—	—	—	—
„ 9	15	Berry Street	Shelmersdale, Ormskirk.	John Houghton	Thomas Rigby	Drawer	24	Fall of coal	—	1	—	—	—
„ 14	16	Moss House	Rainford St. Helen's	Blackwell and Fowler	Hampson	Coal dresser	12	Crushed between two coal trucks	—	—	—	—	1
„ 19	17	Ravenhead	St. Helen's	Bromilow, Haddock, & Co.	Thos. Ratcliffe	Blacksmith	67	Deceased was thrown down by the capstan rope catching on the engine-beam.	—	—	—	—	1
„ 15	18	Greenslate	Wrightington, Wigan.	Greenslate Coal Co.	John Baxendale	Drawer	13	Fall of roof	—	1	—	—	—
								Carried forward	32	6	2	2	5

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866.								Brought forward -	32	6	2	2	5
Feb. 19	19	Wynn Hall -	Ruabon, Denbighshire.	The Wynn Hall Coal Co.	—	—	–	Falling from part way down the shaft.	–	–	1	–	–
„ 20	20	Riding Lane -	Ashton in Makerfield, Wigan.	Cross and Tetley & Co. -	John Watersworth	Sinker -	–	Falling into the shaft from surface -	–	–	1	–	–
„ 22	21	Pewfall -	St. Helen's -	Richard Evans & Co. -	Timothy Winstanley	Collier -	–	Fall of a prop - - -	–	–	–	1	–
„ 24	22	Vron - -	Wrexham - -	Maurice and Low -	Thomas Whalmsley	Charter-master	32	Fall of coal in the main seam -	–	1	–	–	–
„ 27	23	Haigh - -	Wigan - -	Wigan Coal and Iron Co.	Thomas Parkinson	Collier -	40	A stone fell upon the cage as he was going down the pit and knocked him out, and he fell down and was killed.	–	–	1	–	–
„ 28	24	Blackleyhurst -	St. Helen's -	Samuel Stock - -	William Foster -	Horse driver	13	Fall of roof - - -	–	1	–	–	–
Mar. 3	25	Holme House -	Wigan - -	Ralph Rimner - -	Elias Rimner -	Labourer -	–	A brick wall round the pit bank fell upon him.	–	–	–	–	1
„ „	26	Brynn Moss -	Ditto - -	Entwistle and Whittle -	James Grundy -	Collier -	–	An explosion in the Wigan 4-ft. mine	1	–	–	–	–
					Geo. Adamson -	Ditto -	–	Ditto - - - -	1	–	–	–	–
„ 9	27	Rose Bridge -	Ditto - -	J. G. Morris - -	Samuel Gerard -	Drawer -	17	Fall of coal at the working face -	–	1	–	–	–
„ 12	28	St. Helens -	St. Helens -	Messrs. Pilkington -	Henry Marsh -	Collier -	–	Fall of roof - - -	–	1	–	–	–
„ 14	29	Shevington -	Near Wigan -	John Tayleur - -	Nathaniel Bentham	Ditto -	24	Ditto - - - -	–	1	–	–	–
„ 20	30	Kirkless Hall -	Wigan - -	Wigan Coal and Iron Co.	Jas. McCormick -	Drawer -	15	Ditto at No. 3 pit - -	–	1	–	–	–
„ „	31	Park Lane -	Ditto -	Mercer and Evans -	Jno. Baxter -	Labourer -	43	Foot run over by a coal truck -	–	–	–	–	1
„ 21	32	Kirkless Hall -	Ditto -	Wigan Coal and Iron Co.	J. Makurson -	Platelayer -	54	Crushed between the waggon and a wall.	–	–	–	–	1
„ „	33	Brymnally -	Wrexham - -	Thomas Clayton - -	Daniel Pain -	Collier -	31	Fall of roof - - -	–	1	–	–	–
„ „	34	Bryn yr Owen -	Ditto - -	Bryn yr Owen Coal Co. -	Wm. Pritchard -	Assistant hooker on	14	Falling on the plates in the mouthing	–	–	–	1	–
„ „	35	Ravenhead -	St. Helens -	Brownlow and Haddock -	Ellis Greyson -	Fireman -	26	Deceased was trying to lift the engine over the centre by the fly-wheel, when he fell into the gearing.	–	–	–	–	1
„ 24	36	Mostyn -	Holywell - -	Mostyn Colliery Co. -	Edward Williams -	Labourer -	68	Fall of coal in 3-yards mine -	–	1	–	–	–
„ „	37	Ruabon -	Ruabon, Denbighshire.	Ruabon Coal Co. -	Samuel Mitchel -	Horse driver	14	Crushed between the side of the road and the full tubs.	–	–	–	1	–
								Carried forward -	34	14	5	5	9

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866.								Brought forward	34	14	5	5	9
Mar. 28	38	St. Helens	St. Helens	Messrs. Pilkington	Peter Winstanley	Carpenter	25	Deceased fell off the cage while examining the pit.	–	–	1	–	–
" "	39	Nut Grove	Ditto	Jas. Radley	— Fenny	Stoker	–	Falling into the winding gear of the engine.	–	–	–	–	1
"	40	Leeswood Hill	Leeswood, Mold	North Wales Coal, Cannel, and Oil Co.	William Jones	Collier	–	Fall of coal in a level	–	1	–	–	–
" 12	41	Nant Mawr	Mold "	Nant Coal Co.	William Parry	Ditto	–	An explosion on the 2d instant	1	–	–	–	–
" 15	42	Rainford	St. Helens	Walmsley and Co.	Alice Appleton	Coal cleaner	16	Attempting to cross the line when the trucks were moving.	–	–	–	–	1
" 16	43	Mostyn	Holywell, Flintshire.	Mostyn Coal Company	John Thomas	Collier	—	Fall of coal in a travelling road	–	1	–	–	–
Apr. 13	44	Garswood Park	St. Helens	David Brownlow & Co.	Joseph Hill	Collier	30	Fall of roof	–	1	–	–	–
" 17	45	Leeswood Green	Leeswood Mold	The Leeswood Green Cannel Company.	John Williams	Miner	22	The scaffold on which he was working gave way, and fell down the pit.	–	–	1	–	–
" "	46	Sutton	St. Helens	Sankey Brook Coal Co.	William Killshan	Drawer	14	Falling into the winding gear	–	–	–	–	1
" 20	47	Tawd Vale	Tawd Vale, Ormskirk.	Tawd Vale Coal Co.	Wm. Maitland	Collier	—	Fall of coal	–	1	–	–	–
" 25	48	Kenyon	Ruabon, Denbighshire.	The Kenyon Coal Co.	Charles Smith	Sinker	—	Fall of stone from the top of sinking pit.	–	–	1	–	–
" 26	49	Mostyn	Holywell, Flintshire.	The Mostyn Coal Co.	Robert Humphries	Collier	36	Suffocation in explosive gas	–	–	–	1	–
" 27	50	Prospect	Standish	Wigan Coal and Iron Co.	Henry Bimson	Collier	20	Fall of roof in the cannel mine	–	1	–	–	–
" "	—	Ditto	Wigan	Ditto	Wm. Banks Daniel Mason	Drawer Ditto	12 12	Ditto ditto ditto Ditto ditto ditto	– –	1 1	– –	– –	– –
" "	51	John Pit	Ditto	Ditto	Daniel Holland	Collier	25	Ditto ditto ditto	–	1	–	–	–
May 1	52	Norley	Wigan	Norley Coal Company	William Amscough	Pit carpenter	—	Falling in the shaft while fixing pumptrees.	–	–	1	–	–
" 3	53	Haydock	St. Helens	Richard Evans & Co.	John Shepherd	Day wage-man.	50	Fall of roof	–	1	–	–	–
" 4	54	Garswood Park	Ditto	David Brownlow & Co.	Peter Molyneux and 12 others.	Colliers and drawers.	55	An explosion of firedamp in the Little Delf mine.	12	–	–	–	–
								Carried forward	47	23	9	6	12

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866.								Brought forward -	47	23	9	6	12
May 8	55	Bromfield -	Mold - -	Bromfield Coal Company	Evan Jones -	Sinker -	47	An explosion - - -	1	–	–	–	–
					Sam Jones - -	Ditto -	36	Ditto - - - -	1	–	–	–	–
" "	56	Ince Hall -	Wigan - -	Ince Hall Coal and Cannel Company.	John Fitzgerald -	Hooker-on -	20	Descending cage falling upon him -	–	–	–	1	–
" 12	57	St. Helens -	St. Helens -	Messrs. Pilkington -	John Edge - -	Sinker -	—	The capstan rope slipping off the drum.	–	–	1	–	–
" 15	58	Rose Bridge -	Wigan - -	J. G. Morriss - -	Jas. Cheetham -	Drawer -	28	Fall of roof in the Cannel mine -	–	1	–	–	–
" 21	59	Springs - -	Ditto -	Pearson and Knowles -	John Lowe - -	Fireman -	—	Fall of roof in the mouthing at the bottom of the pit while making repairs.	–	1	–	–	–
					Wm. Rogers -	Collier -	—		–	1	–	–	–
" 11	60	Westminster -	Wrexham -	Westminster Coal Co. -	Thos. Enoch -	Collier -	18	An explosion in the Brassey mine -	1	–	–	–	–
June 2	61	Haydock -	St. Helens -	Richard Evans & Sons -	Henry Pearson -	Collier -	21	An explosion of gunpowder -	1	–	–	–	–
" "	62	Springs -	Wigan - -	Pearson and Knowles -	Thos. Winstanley -	Drawer -	—	Fall of coal for want of a spragg in the Wigan 9-feet mine.	–	1	–	–	–
" 6	63	Ruabon -	Ruabon - -	Ruabon Coal Company -	Edward Jones -	Collier -	28	Attempting to get into the cage after the engine was in motion.	–	–	–	1	–
" 12	64	Ravenhead -	St. Helens -	Bromilow, Haddock, & Co.	Thos. Partington -	Drawer -	18	Fall of roof - - -	–	1	–	–	–
" 16	65	Crow Orchard -	Ormskirk - -	Crow Orchard Colliery Co.	Jos. Ollerton -	Ditto -	19	Attempting to get out of the cage before it reached the top.	–	–	1	–	–
" 19	66	Wylva - -	Mold - -	Wylva Coal Company -	Wm. Butterworth -	Collier -	—	An explosion of gas - -	1	–	–	–	–
" 22	67	Mostyn - -	Holywell - -	Mostyn Coal Company -	Thos. Williams -	Horse driver	16	A large poll fell off a tub in the tunnel and struck him on the breast.	–	–	–	1	–
" "	68	Bromfield -	Mold - -	Bromfield Coal Company -	Robert Jones -	Sinker -	42	Falling down the pit off the top of the water bucket on which he was standing while descending the pit.	–	–	1	–	–
" 28	69	Crow Orchard -	Ormskirk - -	Crow Orchard Coal Co. -	James Maitland -	Pitman -	26	Falling from partway down the pit while repairing the pump-rod.	–	–	1	–	–
July 6	70	Bickershaw -	Wigan - -	Ackers, Whitley & Co. -	David Dicconson -	Tunneler -	—	Fall of roof - - -	–	1	–	–	–
" 7	71	Haigh - -	Ditto - -	Wigan Coal and Iron Co. -	Richard Anders -	Breaksman	34	Crushed between coal trucks on the surface.	–	–	–	–	1
" 10	72	Douglas Bank -	Ditto - -	J. G. Morriss - -	Wm. Berry - -	Collier -	40	Fall of roof whilst drawing props -	–	1	–	–	–
								Carried forward -	52	30	13	9	13

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost. Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866.								Brought forward -	52	30	13	9	13
July 18	73	Haigh - -	Wigan - -	Wigan Coal and Iron Co.	P. Callon - -	Labourer -	20	Crushed between coal trucks on the surface.	–	–	–	–	1
„ 23	74	Ruabon -	Ruabon - -	Ruabon Coal Company -	Edward Davies -	Collier -	47	An explosion - - -	1	–	–	–	–
„ 24	75	Hindley Field -	Wigan - -	Richard Morriss - -	James Potter -	Sinker -	35	Something falling down the pit when he was working at the bottom.	–	–	1	–	–
Aug. 3	76	Vron - -	Wrexham -	Maurice and Low -	Evan Thomas -	Byeman -	—	An iron rail which he was putting in the cage falling upon him on the top.	–	–	–	–	1
„ „	77	Bickerstaffe -	Ormskirk - -	David Brownlow and Co. -	John Hogarth -	Waggon driver.	35	Crushed between the buffers of two coal trucks on the surface railway.	–	–	–	–	1
„ 9	78	Wynnstay -	Ruabon - -	New British Iron Co. -	George Davis -	Collier -	32	Fall of roof - - -	–	1	–	–	–
„ 18	79	Wynn Hall -	Ruabon - -	Wynn Hall Coal Company	— Davis - -	—	—	Fall of roof - - - -	–	1	–	–	–
„ 29	80	Hindley -	Wigan - -	Wigan Coal and Iron Co.	John Watkinson -	Labourer -	53	Fall of roof in No. 7 Pit Yard mine	–	1	–	–	–
Sept. 4	81	Broughton -	Wrexham -	Broughton Coal Company	E. Greaves - -	Labourer -	—	Run over on surface railway -	–	–	–	–	1
„ 20	82	Tawd Vale -	Ormskirk -	Tawd Vale Coal Company	Robert Barker -	Horse driver	13	Run over by boxes under ground -	–	–	–	1	–
„ 22	83	Ince Hall -	Wigan - -	Pearson and Knowles -	Wm. Houghton -	Collier -	—	Injuries received from blasting -	–	–	–	1	–
Oct. 9	84	Edge Green -	Ashton, near Warrington.	Richard Evans & Co. -	Ben. Crooke -	Collier -	45	Fall of coal - - - -	–	1	–	–	–
„ 9	85	Mostyn -	Holywell - -	Mostyn Coal Company -	John Bithol -	Drawer -	13	Attempting to get into the cage after the signal for the engine-man to go on had been given by the hooker-on.	–	–	–	1	–
„ 11	86	Brynmally -	Wrexham -	Thomas Clayton - -	Ed. Jones -	Drawer -	13	Falling into the pit from a mouthing	–	–	1	–	–
„ 15	87	Aspull - -	Wigan - -	Wigan Coal and Iron Co.	John Bailey -	Brick setter	—	Falling from the top of a new engine-house on the surface.	–	–	–	–	1
„ 17	88	Standish and Shevington.	Ditto - -	Ditto - - -	Samuel Perrin -	Metalman -	47	Struck by a shot while blasting -	–	–	–	1	–
„ „	89	Hall in Ince -	Ditto - -	Pearson and Knowles -	Thomas Whittle -	Drawer -	23	Suffocation in black damp - -	–	–	–	1	–
„ 20	90	California -	Ditto - -	Wigan Coal and Iron Co.	Ed. Gorton -	Ditto -	18	Having been run over by boxes in the Arley mine.	–	–	–	1	–
								Carried forward -	53	34	15	15	18

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1666.								Brought forward	53	34	15	15	18
Oct. 23	91	Ravenhead	St. Helens	Brimelon, Haddock, & Co.	Thomas Burrows	Browman	40	Deceased fell off the stage on the top of the pit.	–	–	–	–	1
„ 29	92	Birket Bank	Wigan	Crompton and Shawcross	James Heys	Stoker	—	Deceased was drawn into the fly-wheel race whilst repairing the engine.	–	–	–	–	1
Nov. 3	93	Laffak	St. Helens	John and Thomas Johnson	Thomas Leyland	Horse driver	14	Run over on waggon road	–	–	–	1	–
„ 12	94	Haigh	Wigan	Wigan Coal and Iron Co.	James Corkland	Horse driver	—	Attempting to get out of the cage whilst ascending the pit.	–	–	1	–	–
„ 15	95	Hamner	Holywell	Eyton and Elliot	Ellis Hughes	Collier	28	Fall of coal	–	1	–	–	–
„ 18	96	Westminster	Wrexham	Westminster Coal Compy.	Robert Evans	Chartermaster	34	An explosion in the 2 yards mine	1	–	–	–	–
„ „	97	Coppa	Mold	Coppa Colliery Company	David Roberts	Ditto	55	An explosion on the 24th ultimo	1	–	–	–	–
„ 23	98	Brymbo	Wrexham	Messrs. Darby & Co.	Isaac Owen	Collier	28	Fall of roof in the main coal	–	1	–	–	–
„ 24	99	Lindsay	Wigan	Wigan Coal and Iron Co.	P. Kennedy	Drawer	55	Caught by a tub at the foot of a gig bron in the Arley mine.	–	–	–	1	–
Dec. 7	100	The Oak	Handley Green, near Wigan.	James Speakman	John Walsh	A smith	34	Deceased who was erecting a steam-engine on the surface, fell off the cylinder.	–	–	–	–	1
„ 12	101	Low Hall	Wigan	Moss Hall Coal Company	George Charnock	Collier	28	An explosion in the Wigan 9-feet mine.	1	–	–	–	–
„ 13	102	Venture	Pemberton, Wigan	John Blundell	James Wadsworth	Coal cleaner	—	Run over on the surface by a coal truck.	–	–	–	–	1
„ 20	103	Broughton	Wrexham	Broughton Coal Company	Thomas Burke	Labourer	30	Crushed by coal trucks on the surface.	–	–	–	–	1
„ „	104	Haydock	St. Helens	Richard Evans and Co.	James Carrigan	Collier	30	Fall of roof in Main Delf Queen pit	–	1	–	–	–
„ 29	105	Hindley	Wigan	Wigan Coal and Iron Co.	William Dennett	Horse driver	14	Knocked down by the horse and run over in the Arley mine.	–	–	–	1	–
								Total	56	37	16	18	23

SUMMARY of the FATAL COLLIERY ACCIDENTS, and LOSS OF LIFE arising therefrom, in the WEST LANCASHIRE and NORTH WALES DISTRICT during the Year ended 31st December 1865.

No. of Accident.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Explosions.	Falls off Roof.	In Shafts.	Miscellaneous.	Above Ground.	TOTAL.
2	Bickershaw	Wigan	Ackers, Whitley and Co.	–	1	–	–	1	2
1	Bickerstaffe	Ormskirk	David Bromilow and Co.	–	–	–	–	1	1
1	Borket Bank	Wigan	Crompton and Shawcross	–	–	–	–	1	1
1	Berry Street	Skelmersdale	John Houghton	–	1	–	–	–	1
1	Blackleyhurst	St. Helens	Samuel Stock	–	1	–	–	–	1
2	Bromfield	Mold	Bromfield Coal Company	2	2	1	–	–	3
2	Broughton	Wrexham	Broughton Coal Company	–	–	–	–	2	2
1	Brymbo	,,	Messrs. Darby and Co.	–	1	–	–	–	1
1	Brynn Moss	Wigan	Entwistle and Whittle	2	–	–	–	–	2
2	Brynn Mally	Wrexham	Thomas Clayton	–	1	1	–	–	2
1	Brynn Owen	,,	Brynyrowen Coal Company	–	–	–	1	–	1
1	Coppa	Mold	Coppa Coal Company	1	–	–	–	–	1
2	Crow Orchard	Ormskirk	Crew Orchard Coal Company	–	–	2	–	–	2
4	Douglas Bank and Rose Bridge.	Wigan	J. G. Morriss	–	4	–	–	–	4
2	Garswood	St. Helens	David Bromilow and Co.	12	1	–	–	–	13
1	Greenslate	Wrightington	Greenslate Coal Company	–	1	–	–	–	1
17	Haigh, Kirkless Hall, Prospect, John Pit, Hindley, Aspull, California, Meadows, Holland, Lindsay.	Wigan	Wigan Coal and Iron Company	–	7	2	6	4	19
5	Haydock, Pewfall, Edge Green.	St. Helens	Richard Evans and Co.	1	3	–	–	–	5
1	Hanmer	Holywell	Eyton and Elliot	–	1	–	–	–	1
1	Holme House	Wigan	R. Rimmer	–	–	–	–	1	1
1	Hindley Green	,,	John Scowcroft and Co.	1	–	–	–	–	1
1	Hindley Field	,,	Richard Morriss	–	–	1	1	–	1
1	Ince Hall	,,	Ince Hall Coal and Cannel Co.	–	–	–	–	–	1
5	Ince Hall, Springs, Hall in Ince.	,,	Pearson and Knowles	1	3	–	–	–	6
1	Kenyon	Ruabon	Kenyon Coal Company	–	–	1	–	–	1
1	Laffak	St. Helens	John and Thomas Johnson	–	–	–	1	–	1
1	Leeswood Hill	Mold	North Wales Cannel & Oil Co.	–	1	–	–	–	1
1	Leeswood Green	,,	Leeswood Green Canal Co.	–	–	1	–	–	1
1	Little Mountain	Buckley	Little Mountain Coal Company	–	–	1	–	–	1
1	Low Hall	Wigan	Moss Hall Coal Company	1	–	–	–	–	1
5	Mostyn	Holywell	Mostyn Coal Company	–	2	–	3	–	5
1	Moss House	Rainford	Blackwell and Fowler	–	–	–	–	1	1
1	Nant Mawr	Mold	Nant Coal Company	1	–	–	–	–	1
1	Norley	Wigan	Norley Coal Company	–	–	1	–	–	1
1	Nut Grove	St. Helens	James Radley	–	–	–	–	1	1
1	Oak	HindleyGreen, Wigan.	J. Speakman	–	–	–	–	1	1
2	Park Lane and High Brooks	Wigan	Mercer and Evans	30	–	–	–	1	31
1	Pentre Saeson	Wrexham	Pentre Saeson Coal Company	–	–	1	–	–	1
6	Ravenhead	St. Helens	Bromilow, Haddock, and Co.	–	2	–	–	4	6
1	Rainford	,,	Walmsley and Co.	–	–	–	–	1	1
1	Riding Lane	Ashton-in-Makerfield.	Cross, Tiley, and Co.	–	–	1	–	–	1
3	Ruabon	Ruabon	Ruabon Coal Company	1	–	–	2	–	3
3	St. Helens	St. Helens	Messrs. Pilkington	–	1	2	–	–	3
1	Sutton	,,	Sankey Brook Coal Company	–	–	–	–	1	1
1	Shevington	Wigan	John Tayleur	–	1	–	–	–	1
2	Tawd Vale	Ormskirk	Tawd Vale Coal Company	–	1	–	1	–	2
1	Tryddyn	Mold	Flintshire Oil and Cannel Co.	–	–	–	–	1	1
1	Venture	Pemberton	John Blundell	–	–	–	–	1	1
2	Vron	Wrexham	Maurice and Low	–	1	–	–	1	2
1	Wern	Bagilt	Wern Colliery Company	–	1	–	–	–	1
2	Westminster	Wrexham	Westminster Coal Company	2	–	–	–	–	2
2	Wynn Hall	Ruabon	Wynn Hall Coal Company	–	1	1	–	–	2
1	Wylva	Mold	Wylva Coal Company	–	–	–	–	–	1
1	Wynnstay	Ruabon	New British Iron Company	1	1	–	–	–	1
105				56	37	16	18	23	150

Mr. Evans' Report.

Report on the Inspection of Coal Mines, and the Mines of Ironstone of the Coal Measures, worked in connexion with Coal, &c. in the District comprising the Counties of Derby, Nottingham, Leicester, and Warwick, for the Year ended 31st December 1866.—By Thomas Evans, Esq., F.G.S.

Sir, Belper, 1st March 1867.

As Inspector of Mines for the Midland District of England, comprising the Counties of Derbyshire, Leicestershire, Nottinghamshire, and Warwickshire, I have the honour to submit this my twelfth annual report on the working of the several Acts of Parliament for the regulation and security of persons employed in and about the mines.

The schedule of accidents and deaths accompanying this report shows a considerable reduction in the number of separate accidents, and it affords me no little pleasure having to report so satisfactory a decrease in the number of deaths.

The quantity of coal worked in the year 1865 was 7,575,000 tons, lives lost 82, or one death to about 92,383 tons of coal; this year the coal worked is about 7,600,000 tons, lives lost 58, or one death to every 131,034 tons of coal; this will compare favourably with most other districts of England.

TABLE No. 1.

Table showing the Number of Deaths, the Coal raised, and the Number of Tons of Coal raised for each Death, during the 11 Years ended 31st December 1866.

Dates.	Explosions of Gas.	Inundation of Water.	Falls of Coal.	In Shafts.	Crushed by Tubs, and Miscellaneous.	Total.	Tons of Coal raised.	Tons of Coal raised for each Death.
1856	3	–	21	16	6	46	4,500,000	97,000
1857	15	–	14	6	20	55	4,750,000	86,000
1858	–	–	16	16	10	42	5,060,000	121,000
1859	2	–	18	13	7	40	5,460,000	134,000
1860	3	–	21	13	13	50	6,215,000	124,000
1861	3	23	21	15	7	69	6,503,319	94,000
1862	2	–	25	4	12	43	6,647,000	154,000
1863	4	5	26	9	8	52	7,000,000	134,000
1864	11	–	30	9	16	66	7,300,000	110,000
1865	9	–	36	13	24	82	7,575,000	92,383
1866	7	–	26	6	19	58	7,600,000	131,034

Explosions of gas. Six separate explosions have occurred during the year, and seven lives lost. In almost every case, had ordinary care been taken, and the General and Special Rules properly attended to by the agents and workmen, these explosions might have been prevented.

Falls of roof. Twenty-six deaths from falls of coal, roof, and sides of workings. Although this is a considerable decrease on the two previous years, yet it still remains the most fertile source of accident. On reference to the record kept of the deaths in the district for the past 11 years, it will be seen that 254 lives were lost by "falls of roof," as against 59 from "explosions of gas." In many cases the unfortunate sufferers are themselves to blame; they are so accustomed to danger as to become somewhat reckless, and will not, even after they are cautioned, secure the roof as they advance. On the other hand, a practice prevails at some of the collieries, indeed, at the largest in my district (the *Butterley Works*), of making the colliers pay for the timber used by them in propping the roof. This I consider to be a practice attended with much evil, a strong inducement is held out to the workmen to use as little timber as possible, often not sufficient; the collier probably has to pay from two to three shillings a fortnight out of his wages. I have pointed out this matter to the managers of the mines, and with them now rests the responsibility of continuing a custom so fraught with danger.

Shafts.

Shaft accidents are six during the year. One man fell out of the carriage whilst it was in motion; another fell out of a bucket in ascending a pumping pit; one boy was killed at the bottom of the shaft by the falling on him of a lump of coal out of an ascending tub; a banksman fell into a shaft, there being no self-acting fence; and two deaths occurred on the surface through breakage and derangement of machinery at sinking shafts. It is very satisfactory to know that *seven million tons of coal* have been raised through shafts without the slightest accident to those employed through the breakage of ropes, overwinding, or defective machinery. Many of the shafts of this district are of considerable depth, and will become very much more so as the coal field becomes developed,

Crushed and run over by tubs and trams.

Eleven lives were lost by being crushed against the sides of workings, run over on inclines and travelling roads; of this number nine were under 14 years of age, and chiefly employed in bringing down tubs of coal from the working places to the levels; an old man was killed on the main travelling way, by stepping into the wrong road just as a train of full tubs was coming along it. At Nailstone Colliery, in Leicestershire, a boy was bringing out a full train to the shaft; he placed himself in front of it to regulate the speed, but in consequence of the rapid inclination in the road, together with the weight of the load, he soon became overpowered. To relieve himself of the burden and to save his own life, he stepped aside; it soon attained great velocity, and not being under control, knocked down a man named James Vickers as he was walking out to the shaft and killed him. I have had occasion to point out to the owner of this mine the great want of discipline and disregard to the safety regulations. In this particular case the unfortunate lad had to do work which is usually performed by a horse or pony. I am, however, happy to state that now the management has been undertaken by a competent mining engineer, who will no doubt give proper attention to the under-ground operations, and thereby secure greater safety to those employed.

Explosions of powder.

At the Watnall Colliery, belonging to Messrs. Barber, Walker, and Company, an explosion of powder took place and caused the death of one man and injury to others, The powder had been taken into the colliery that morning (for the ordinary purposes of blasting the coal) in a tin canister, which held from five to six pounds, but unfortunately the stallman had neglected to provide the canister with a properly fitting lid, and by some means a spark from the naked light of one of the men fell amongst the powder. The Special Rules provide, that "gunpowder, when used, must be taken into the mine "either made up in cartridges or in a tin canister, and only as much as is required for "the day's work."

Another explosion of powder, in the early part of the year. took place at Clay Cross Colliery, when a man named Thomas Lone was mortally injured; he lingered on until the month of November last. This was purely an accident.

Surface.

Two men were run over and killed on sidings in connection with public railways. They can scarcely be considered colliery accidents, but have been included in the list as the deceased were colliers and they occurred as the men were proceeding to or from their work. One engine stoker fell under the crank of the winding engine; a pony driver became entangled in the incline machinery; and an engine-fitter was crushed by the falling on him of a large casting whilst engaged unloading it.

Non-fatal accidents.

Several serious non-fatal accidents have been reported to me during the year; they have arisen chiefly from falls of the roof, and in two or three cases slight explosions of gas.

Bratticed shafts.

Every colliery in the district is now, I believe, provided with two or more distinct means of "ingress and egress," and in that respect the Act of Parliament 25 & 26 Vict. cap. 79. is fully carried out.

Ironstone mines.

Notices of eight separate accidents have been received during the year, attended with the loss of eight lives. One man, whilst engaged taking the casing out of an old shaft at Glasshouse Common.

Two boys, under 11 years of age, fell into a shallow shaft (about 10 yards deep) at Messrs. Whitehouse's mines; they were engaged attending to the horse at the "gin," and ought not to have been near the pit-top. The father of one of these poor boys was the contractor, and consequently the immediate employer of them. I pointed out to the contractor, that although it was no violation of the law having children at such work, they were too young to be about shafts.

One miner was crushed between a prop and a tub; another run over on surface.

A fall of roof at the Butterley Company's mines killed a miner. The owners or agent did not give me notice of this accident, as they did not consider the mine came within the meaning of the Inspection Act; in fact, that it was not worked "in connexion with an exhausted mine." At the request of the coroner I attended the inquest, and after hearing the evidence no doubt is left in my mind but that it is worked in connexion with the old black shale colliery, indeed through the original shaft. In this case the timber used for supporting the roof is paid for by the ironstone workers, and the evidence was very clear as to the insufficient supply of timber and consequent bad state of the roof; and so it will be so long as this practice continues.

It is most important that all mines of ironstone of the coal measures, all argillaceous mines, whether worked in connexion with coal or not, should be included in the Mines Inspection Act. At present it is most difficult to understand what the Act really does mean, and what interpretation to put on the words "any disused or exhausted coal mine." It was contended by Mr. Fowler, the managing director of Sheepbridge works, that his mines at Glasshouse Common were exempt, and that he was not obliged to have rules, signals, breaks, indicators, and so on. I, however, thought differently, and as it appeared to me to be exactly a similar case to the Messrs. Appleby's (and fully reported on last year), I instituted proceedings before the magistrates, and they decided the ironstone mine was workedi n connexion with the disused black shale coal workings. I objected to the system of having only one engine to wind from 12 to 16 shafts at unequal depths and varying distances. A sketch of the winding arrangements at Messrs. Appleby's mines accompanies this report.

Prosecutions.

I have felt it my duty, after having had the permission of the Secretary of State, to institute proceedings before the magistrates against the following persons for violations of the Act of Parliament:—

The Managing Director of the Sheepbridge Iron and Coal Company, "Limited."
Phillip Potter, Rutland Colliery.
W. D. Gainsford, Manager at Birley Vale Colliery, Sheffield.

Mr. Potter was fined *ten pounds* for that he neglected to report a fatal accident; the money has been pald to the widow of the deceased collier.

Mr. Gainsford was convicted for that he neglected to provide "sufficient places of refuge at the sides of an engine plane at intervals of not more than twenty yards apart." This case will be again referred to in the report.

The Sheepbridge Iron Company's case has already been alluded to, it was a prosecution for the purpose of deciding a point of law, and not consequent on an accident.

No. 5 accident.—Explosion of Gas, Hucknall Torkard.

A little gas lodged in or near the roof of the mine back in the waste; the deputy cautioned the men not to enter that place until such time as he could remove the gas by ventilation; the deceased took his candle, went in, and brought out one piece of timber, and in going in a second time an explosion took place. It is scarcely possible at all times, especially where the roof breaks off, or what is locally called "the weight comes on," to keep it perfectly clear of gas; in this case it might have been diluted and would have been in a few hours; if deceased had remained at his proper place of work he would have been quite safe.

No. 6 accident.—Pooley Hall Colliery.

At this colliery the manager made no provision for the ventilation of a heading, but allowed it to fill with gas; he then directed two men to make a communication between an upper level and the extreme rise point of this heading, and this they did with naked lights; when the desired communication was made, the gas passed with the air into the level directly in contact with naked lights, and as a matter of course an explosion was the inevitable result.

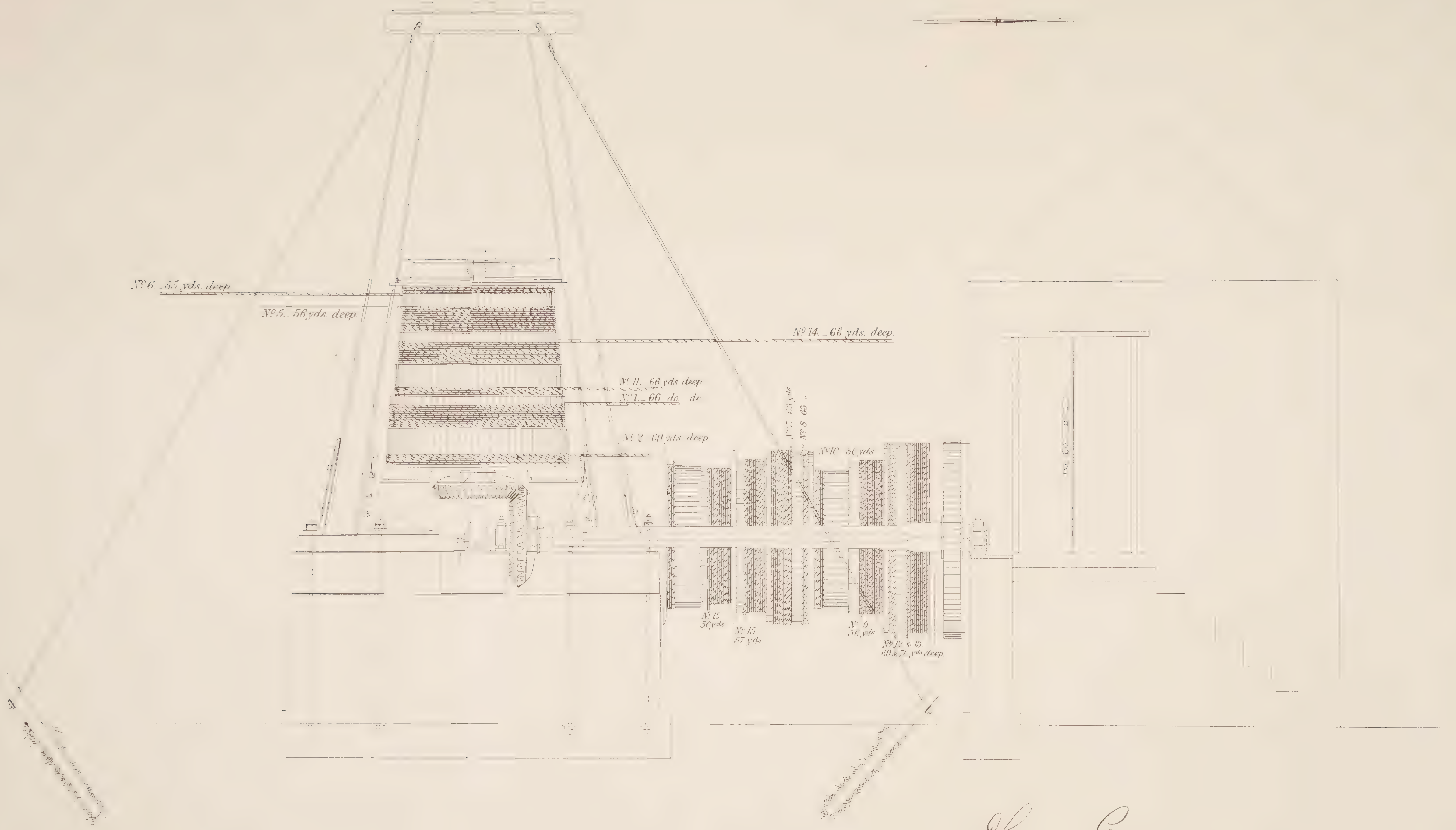
The manager was ignorant of the common and ordinary rules of a colliery; he was much to blame in first allowing the gas to accumulate and then to allow men to work there without safety lamps. The owners, in my opinion, are not wholly free from blame in appointing such a man to the position; he had always, as I understand, worked in the metalliferous mines of Cornwall, and never before in a colliery.

A competent engineer is now in charge of the works.

No. 15 accident.—Explosion of Gas.

At Gresley Wood colliery an explosion of gas took place on the 2d of July. A single door on the main level had been left open, and some gas accumulated in the old workings; on shutting the door, and directing the air in its usual course, it brought out the gas into the level where deceased and others passed from their working places to the

ELEVATION
of
ENGINE AND WINDING DRUMS
AT WHITTINGTON, FEBY. 5TH 1867.


Nº 6. _55 yds. deep
Nº 5._ 56 yds. deep
Nº 14. _66 yds. deep
Nº 11. 66 yds deep
Nº 1._ 66 do. do
Nº 2. 69 yds deep
Nº 7. 63 yds
Nº 8. 63 „
Nº 10 50 yds
Nº 15 50 yds
Nº 15. 57 yds
Nº 9 56 yds
Nº 12 & 13. 69 & 70 yds deep.

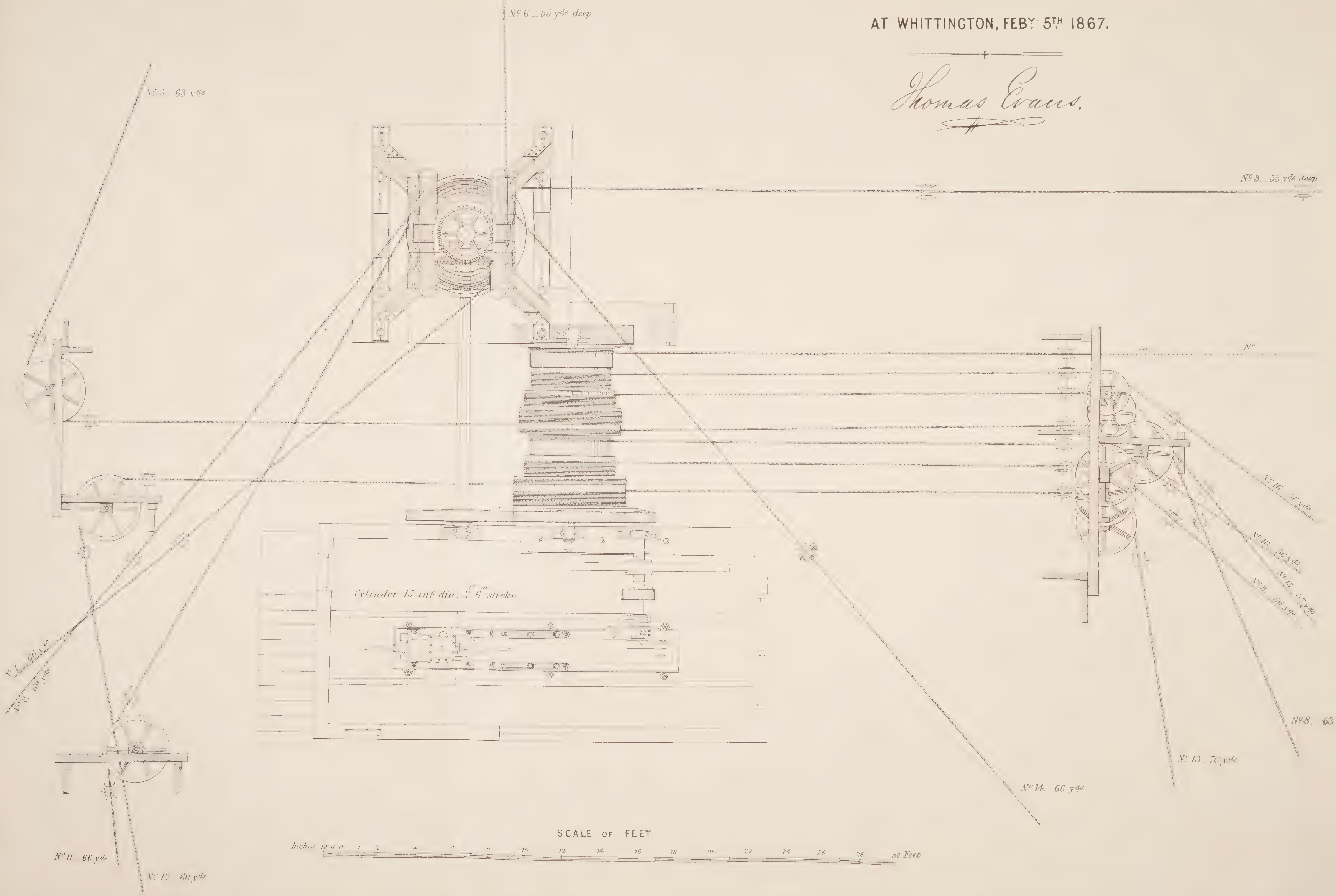
Scale ⅓ inch to the foot.

Thomas Evans. Inspector of Mines

y & Son Limited, Lith. London, W.C.

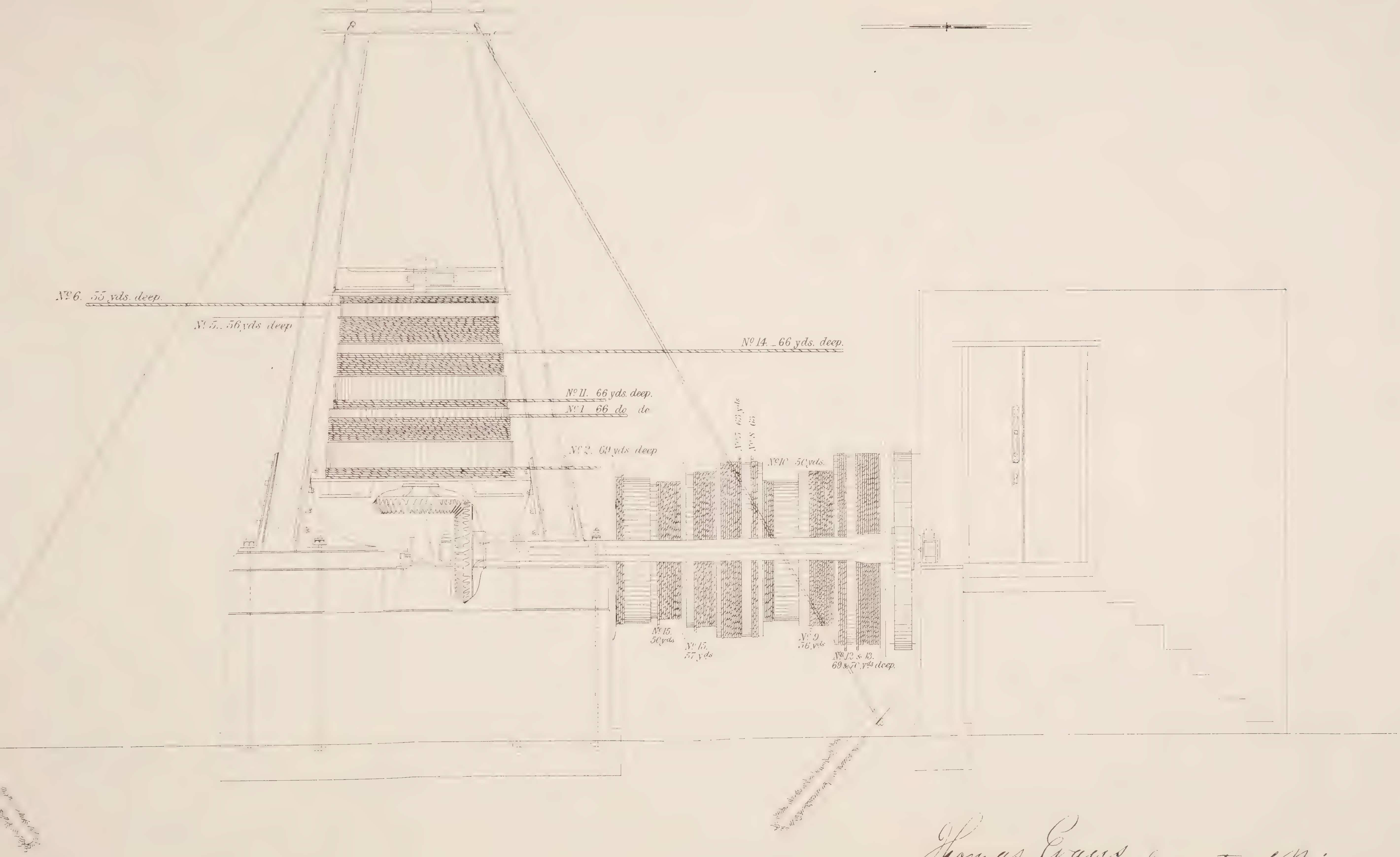
PLAN
of
ENGINE AND WINDING DRUMS
AT WHITTINGTON, FEBY. 5TH. 1867.

Thomas Evans.


Nº 6._55 yds deep
Nº 5. 63 yds
Nº 3._55 yds deep
Nº
Nº 16. 50 yds
Nº 10. 50 yds
Nº 15. 57 yds
Nº 9. 56 yds
Nº 8._63 yds
Nº 13._70 yds
Nº 14. 66 yds
Nº 1. 60 yds
Nº 2. 69 yds
Cylinder 15 ins dia. 2ft. 6in. stroke
Nº 11. 66 yds
Nº 12 69 yds
SCALE OF FEET
Inches 12 6 0 1 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Feet

Day & Son Limited. Lith. London W.C.

ELEVATION
of
ENGINE AND WINDING DRUMS
AT WHITTINGTON, FEBY 5TH 1867.



Nº 6. 55 yds. deep.
Nº 5. 56 yds deep
Nº 14. 66 yds. deep.
Nº 11. 66 yds. deep.
Nº 1 66 do do
Nº 2. 69 yds deep
Nº 7. 63 yds
Nº 8. 63
Nº 10 50 yds.
Nº 15. 50 yds
Nº 15. 57 yds
Nº 9 56 yds
Nº 12 & 13. 69 & 70 yds deep.

Thomas Evans. Inspector of Mines

Scale ⅓ inch to the foot.

ELEVATION
of
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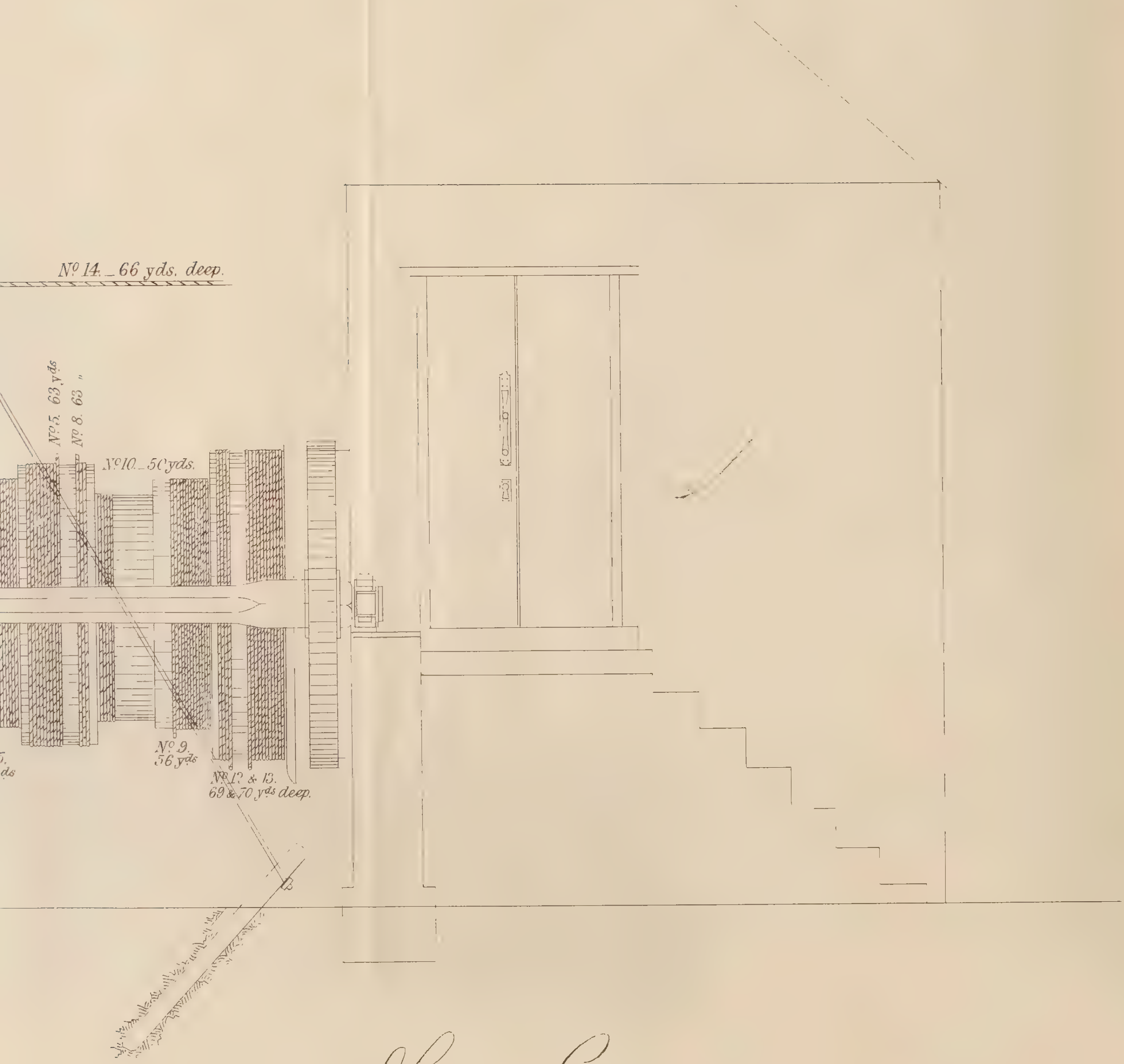

Nº 14. _ 66 yds. deep.
Nº 5. 63 yds
Nº 8. 63 "
Nº 10. _ 50 yds.
Nº 9.
56 yds
Nº 12 & 13.
69 & 70 yds deep.

Thomas Evans. Inspector of Mines

the foot.

shaft, all carrying naked lights. This, with ordinary care on the part of the underlooker, ought not to have happened; there should have been two doors, so that one would be closed whilst the other opened to let people and coal through.

No. 27 *accident.*

The Birley Vale Colliery, belonging to Messrs Jeffcock and Dunn, is within a few miles of the town of Sheffield. An engine plane about 530 yards in length, at an inclination of about *one in five*, has been made from the surface down to the silkstone coal; it is the travelling road through which all the men have to pass to and from their work. On the morning of the 13th September a boy, named Thomas Downes, and others were riding as was their usual custom, in the tubs; but, unfortunately, on this occasion the masons had left some centres under an arch which they had built the night before to support the roof; they were so low as not to allow the tubs to pass under safely, the consequence was they were knocked away by the ascending train, when down came the arch and killed deceased.

An inquest was held by the coroner for the county of York, and after hearing the evidence the jury returned the following verdict:—"That Thomas Downes was killed " in the Birley Vale Colliery in the township of Beighton, Derbyshire, by a fall of " timber and bricks used in the construction of arches in the said colliery, such fall " being caused by corfs (or tubs) containing men knocking down the timbers sustaining " the bricks.

"The coroner and jury were satisfied they could not find any one guilty of a criminal " offence, although they thought the manager (W. D. Gainsford) and overman (William " Walker) were blameable."

The manager had not provided proper signal or sufficient places of refuge. He certainly ought not to have allowed any person to ride up or down the incline when in such an unfinished state. I cannot conceive why the place had not been properly examined that morning before the men went to work. Altogether there appeared to me to be such a terrible amount of carelessness on the part of those in authority that proceedings were taken and a conviction obtained.

On this same incline another poor man met with his death, and this in my opinion arose from the careless way in which the timber is fixed, not allowing sufficient room for the corfs (tubs) to pass.

The surface arrangements, engines, boilers, houses, are in a dirty condition, and appear to require supervision.

No. 36 *accident.—Explosion of Gas.*

Deceased met with his death from the effects of an explosion of gas at Baddesley Colliery. I believe no gas had been seen in this colliery for months; on this occasion a little had come off from a crack in the roof, the deputy examined the place before the men went to work and found it quite clear; deceased however knew, after working a while, that gas was to be found in small quantities, he ought then to have left the place and reported to the deputy.

A practice attended with considerable danger prevails in this neighbourhood (Warwickshire) of "brushing out" gas instead of properly ventilating the place.

No. 52 *accident.*

This explosion of gas took place in the extreme end of the extensive workings in the Woodfield coal, Stanton Colliery, Burton.

The air was not carried around the stalls, the consequence was, gas lodged at the rise end of the workings and fired at the naked light of one of the deceased. I pointed out at the inquest that sufficient attention was not given to matters of detail, especially as regards brattice, and more supervision was necessary.

Upcast shafts.

In very many of the collieries of the midland counties the means of ingress and egress for those employed under ground is through the upcast shaft. I have on some occasions felt the heat to be excessive, and the smoke from the consumed coal at the furnace most offensive. In all new, and as far as practicable in existing mines, men should be lowered and raised through the downcast in the fresh air. In case of stoppage from accident or derangement of machinery, it would be impossible to remain long in some of these hot shafts.

Outburst of gas.

In the hard coal workings at the Shipley Hall Colliery, Derbyshire, on the 4th of January this year (1867), a sudden large outburst of gas took place, filling the "intake" airway for a very considerable distance. It came off in a stall whilst the men were at work, and under such pressure as to force up a coal tub and jam it tight against the roof. The workmen hastened to their lamps; in many cases they were put out by the gas, before they could be reached, only a few feet from them; happily all the lamps were in perfect order (proved to be safety lamps), and the explosive mixture passed away to the upcast shaft; had there been one defective lamp, or any naked light in that part of the mine, the loss of life would probably have been most serious.

This is, I believe, the 6th or 7th blower of gas which has been safely dealt with in this colliery within the past few years.

The discipline of this mine, together with the general management is excellent, and reflects the greatest credit on the viewer Mr. Woodhouse, and his assistants. It must be most gratifying to them and to every one connected with the colliery, to witness the success attending their labours, and that on each occasion the "Geordie" Stephenson's safety-lamps have all proved good, and in order.

Soon after this last outburst of gas I made an inspection of the colliery, and have since had several interviews with the viewer. The whole question of the future ventilation is under consideration.

Vorkmen's omplaints.

Complaints have been received from the workmen employed at several collieries in the district. I have in each case taken an early opportunity of investigating them, and occasionally have not found matters in so satisfactory a condition as they ought to be, but generally on representation to the owner or manager every attention has been given to my suggestions.

mployment f boys.

Although the rule of the district generally is not to employ a boy under-ground at an earlier age than 12 years, there are, however, special exceptions. In the case of a widow being left with young children, one of the children worked in the mine when 11 years of age, and attended school. I have also found, in one or two cases, a misrepresentation made to the overman by the parents, this has had the effect of their insisting on the production of a copy of the registration of birth.

nspection of ines.

It is well known to all practical men of this district that inspection of mines has proved to be most beneficial, probably not to the extent anticipated by the public, who in forming their opinions, and drawing conclusions of the death-rate, lose sight of the enormous and sudden increase in the quantity of coal worked, the necessary development of the underground workings at greater depths, giving off larger quantities of gas, and the employment too often of inexperienced hands, induced to follow the occupation of miners by the high rate of wages offered.

It is shown in table No. 1 in this report, that in the year ended 31st December 1857, the quantity of coal worked was $4\frac{1}{2}$ million tons, whereas this year (1866) it is $7\frac{1}{2}$ million tons.

Although I do not agree with much that is contained in a report signed by Mr. James P. Baker, in answer to Lord Belmore's circular letter of the 26th of December, I do think the number of inspectors is sufficient for carrying out the Act of Parliament as it now exists. Possibly the districts might be re-arranged with advantage, and the appointment of an assistant to each inspector would relieve him of some work he might depute to another.

At present the inspector is always in his district, ready to receive complaints and investigate them, to inquire into the cause of accidents, and generally to advise on any matter presenting a difficulty. It is impossible to prevent accidents altogether, and if the owner and agent is relieved of responsibility, on whom is it to fall? certainly not on the Government, unless they undertake the management of the mines altogether, and appoint as many inspectors as there are now agents, with power over the expenditure.

I should be glad to see the provisions of Lord Campbell's Act made so as to be within the reach of the friends of any person injured, and when any violation of the rules can be brought home to the owner or agent, substantial compensation be paid by them.

The number of collieries in this district are about 196, giving employment to about 27,000 persons, working 7,600,000 tons of coal.

I have, &c.
THOMAS EVANS,
Inspector of Mines.

The Right Hon. Spencer H. Walpole, &c. &c.
Her Majesty's Principal Secretary of State, Whitehall.

List of the Fatal Colliery Accidents, and Loss of Life arising therefrom, in the Midland District during the Year ending 31st of December 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In shafts.	Miscellaneous.	Above ground.	Total.
1866.														
Jan. 4	1	Mexbro	Alfreton	Butterley Iron Co.	William Thorpe	Collier	16	Fall of bind side of heading	–	1	–	–	–	1
„ 16	2	Loscoe	Ilkeston	Ditto	Alfred Radcliffe	Ditto	14	Fall of bind face of working	–	1	–	–	–	1
„ 17	3	Clay Cross	Chesterfield	William Jackson, M.P.	William Cooper	Ditto	49	Fall of stone from roof in stall	–	1	–	–	–	1
„ 23	4	Hollingwood	Chesterfield	Stavely Iron & Coal Co.	Robert Taylor	Ditto	67	Crushed between railway trucks and screen.	–	–	–	–	1	1
„ 27	5	Hucknall Torkard	Nottingham	Ellis and Co.	Edward Keene	Ditto	30	Explosion of gas	1	–	–	–	–	1
Feb. 7	6	Pooley Hall	Tamworth	Pooley Hall Co. Limited	William Blower	Ditto	65	Explosion of gas; inadequate ventilation.	1	–	–	–	–	1
„ 21	–	Monkwood	Chesterfield	Plevins and Co. Limited	Eliza Wallis	Not employed	11	Run over whilst gathering coal on pit heap.	–	–	–	–	–	1
„ 26	7	Grassmore	Chesterfield	Barnes and Co.	Joseph Lowe	Collier	16	Running a tub against him and pit frame.	–	–	–	–	1	1
Mar. 12	8	Loscoe	Ilkeston	Butterley Iron Co.	William Martin	Horse driver	14	Run over by tubs in working place.	–	–	–	1	–	1
„ 12	9	Clay Cross	Chesterfield	William Jackson, M.P.	Joseph Davis	Collier	76	Injured in the back	–	1	–	–	–	1
Apr. 4	10	Cotmanhay	Eastwood	Barber, Walker, and Co.	Charles Wheatly	Ditto	22	Fall of bind in working place	–	1	–	–	–	1
„ 30	11	Bagworth	Leicester	Viscount Maynard	Joseph Kilhew	Banksman	34	Run over by railway truck	–	–	–	–	1	1
May		No accident resulting in death.												
June 11	12	Clay Cross	Chesterfield	William Jackson, M.P.	Augustus Cupid George Holmes	Collier Ditto	— —	Fall of roof, No. 4 pit	–	2	–	–	–	2
„ 13	13	Mexbro	Alfreton	Butterley Iron Co.	William Honse	Ditto	17	Fall of roof	–	1	–	–	–	1
„ 25	14	Clay Cross	Chesterfield	William Jackson, M.P.	William Scarle	Ditto	—	Fall of roof (Tupton pit)	–	1	–	–	–	1
July 2	15	Gresley Wood	Burton-on-Trent	Limited Co.	Henry Scott	Ditto	13	Explosion of gas	1	–	–	–	–	1
„ 4	16	Nailstone	Leicester	J. Ellis	John Price	Ditto	24	Coal fell off carriage in shaft	–	–	1	–	–	1
„ 23	17	Newcastle	Nottingham	Thomas North	John Heuson	Ditto	66	Crushed by tubs on main traveling way.	–	–	–	1	–	1
Aug. 1	18	Church Gresley	Ashby-de-la-Zouch	Marquis of Hastings	John Jenkinson William Chapman	Boy Ditto	13 14	Run over on self-acting incline	–	–	–	2	–	2
„ 8	19	High Park	Nottingham	Barber, Walker, and Co.	Richard King	Collier	—	Fall of roof	–	1	–	–	–	1
„ 11	20	Langly	Ilkeston	Butterley Co.	John Revill	Boy	13	Run over in trying to bring loaded tub from a stall.	–	–	–	1	–	1
„ 13	21	Hawkesbury	Bedworth	Hawkesbury Coal Co.	Isaac Farndon	Driver	14	Run over riding on tubs, and fell off.	–	–	–	1	–	1

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866. Aug. 21	22	Highfield	Alfreton	Oakesthorpe Company	Joseph Bakewell	Boy	13	Entangled with self-acting incline drum and chain.	–	–	–	1	–	1
„ 29	23	Riddings	Alfreton	James Oakes	Thomas Gee	Banksman	28	Fell into shaft; no self-acting fence	–	–	1	–	–	1
Sept. 3	24	Marehay	Ripley	Butterley Coal & Iron Co.	William Green	Collier	19	Fall of bind	–	1	–	–	–	1
„ 3	25	Hartshay	Ripley	Ditto	Jacob Jackson	Ditto	53	Fall of bind. Colliery in a bad condition, both roads and ventilation.	–	1	–	–	–	1
„ 10	26	High Park	Nottingham	Barber, Walker, and Co.	John Fretwell	Ditto	28	Fall of bind	–	1	–	–	–	1
„ 13	27	Birley Vale	Sheffield	Jeffcock and Dunn	Thomas Downes	Boy	13	Killed on incline; referred to in Report again.	–	–	–	1	–	1
„ 20	28	Boythorpe	Chesterfield	Luke Sudland	Samuel Rogers	Collier	27	Fall of coal (Furness coal)	–	1	–	–	–	1
„ 20	29	Watnall	Nottingham	Barber, Walker, & Co.	Moses Barrows	Ditto	—	Explosion of gunpowder in tin can	–	–	–	1	–	1
„ 27	30	Birchwood	Alfreton	Charles Seeley	Joseph Rossington	Stoker	22	Fell under crank of engine	–	–	–	–	1	1
„ 28	31	New Hollingwood	Chesterfield	Stavely Iron & Coal Co.	Thomas Baldwin	Collier	24	Fall of coal	–	1	–	–	–	1
Oct. 1	32	Old Hollingwood	Chesterfield	Ditto	William Barroncliff	Ditto	26	Fall of coal	–	1	–	–	–	1
„ 2	33	Snibston	Leicester	G. Stephenson & Co.	William Cooper	Ditto	15	Fall of stone in stall	–	1	–	–	–	1
„ 3	34	Birley	Sheffield	Jeffcock and Dunn	William Turner	Ditto	—	Fall of roof on level improperly timbered.	–	1	–	–	–	1
„ 4	35	Langton	Alfreton	Coke & Co.	William Cockluef	Ditto	—	Fall of bind	–	1	–	–	–	1
„ 10	36	Baddesley	Atherstone	—— Dugdale	John Clamp	Ditto	41	Explosion of gas	1	–	–	–	–	1
„ 10	37	Digby	Nottingham	Hall & Co.	M. Chambers	Banksman	21	Fell into shaft; no proper protection.	–	–	1	–	–	1
„ 10	38	Giltbrook	Nottingham	Hicks and Whittaker	—	Boy	—	Run over on level	–	–	–	1	–	1
„ 16	39	Speedwell	Chesterfield	Staveley Iron & Coal Co.	George Sales	Collier	—	Fall of bind	–	1	–	–	–	1
„ 20	40	Clay Cross	Chesterfield	William Jackson, M.P.	Thomas Lowe	Ditto	—	Explosion of powder in February last.	–	–	–	1	–	1
„ 26	41	Sheepbridge	Chesterfield	Sheepbridge Iron & Coal Co.	Thomas Mitchell	Ditto	43	Fall of roof	–	1	–	–	–	1
Nov. 3	42	Speedwell	Chesterfield	Stavely Iron & Coal Co.	Joseph Cator	Ditto	—	Fall of bind	–	1	–	–	–	1
„ 4	43	Moira	Ashby-de-la-Zouch	Marquis of Hastings	Benj. Wileman	Breaksman	60	Entangled in machinery on surface	–	–	–	–	1	1
„ 10	44	Snibston	Leicester	G. Stephenson and Co.	Joseph Mears	Driver	14	Run over underground	–	–	–	1	–	1
„ 12	45	Cadley Hill	Burton-on-Trent	Hall and Boardman	Isaac Cooknall	Collier	20	Explosion of gas	1	–	–	–	–	1
„ 15	46	Rutland	Ilkeston	Potter and Co.	R. Weston	Ditto	—	Fall of roof	–	1	–	–	–	1
„ 16	47	Devonshire, Silkstone.	Chesterfield	Limited Company	George Marples	Sinker	—	The handles of crab came off, and he fell down shaft.	–	–	1	–	–	1
„ 17	48	West Hallam	Ilkeston	Lieut.-Col. Newdegate	Robert Bancroft	Collier	19	Fall of roof	–	1	–	–	–	1

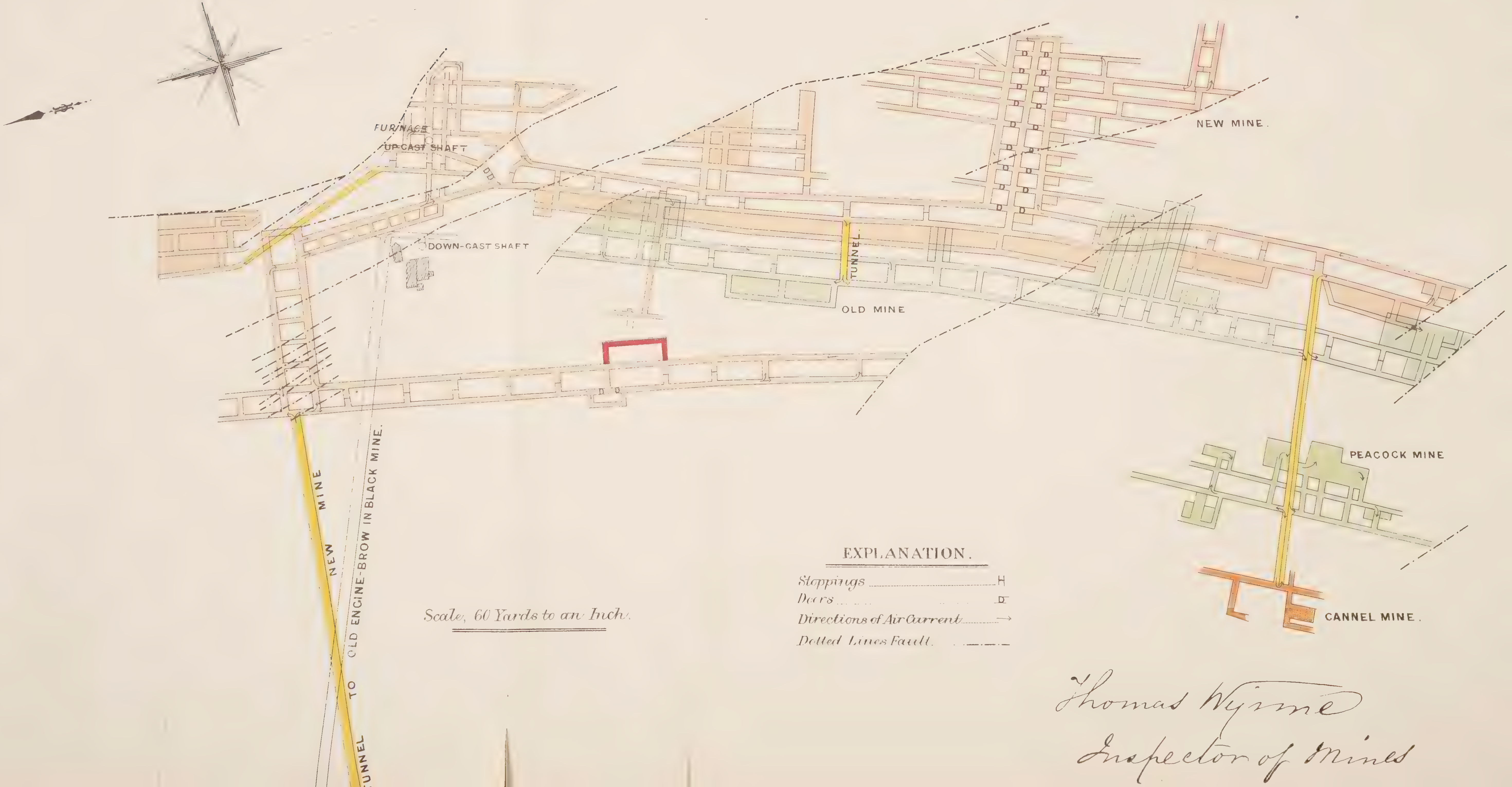
List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866. Dec. 11	49	Nailstone - -	Leicester - -	J. Ellis - - - -	James Vickers -	Collier -	43	Run over in bringing heavy tubs out of working.	–	–	–	1	–	1
„ 11	50	Ibstock - -	Ditto - -	— Whetstone - -	Henry Poole -	Ditto -	—	Fall of roof - - - - -	–	1	–	–	–	1
„ 17	51	Snibston - -	Ditto - -	G. R. Stephenson - -	Edward Carpenter	Ditto -	46	Ditto - - - - -	–	1	–	–	–	1
„ 18	52	Stanton - -	Burton - -	Nadin and Co. - -	——	Ditto -	—	Explosion of gas - - -	2	–	–	–	–	2
„ 19	53	Moorehole - -	Eckington -	J. and G. Wells - -	William Grant -			Fly-wheel of engine capsised in removing, and fell on him.	–	–	–	–	–	1
„ 21	54	Swannington -	Leicester - -	W. Worswick - - -	Walter Harvey -	Ditto -	48	Lump of coal fell down shaft on him.	–	–	1	–	–	1
„ 25	55	Shirland - -	Alfreton - -	Bailey and Co. - -	John Thorpe -	Hitcher -	15	Fell out of sinkers bucket -	–	–	1	–	–	1
								Total - - -	7	26	6	13	6	58

LIST of the FATAL IRONSTONE ACCIDENTS, and LOSS of LIFE arising therefrom, in the MIDLAND DISTRICT during the Year ending 31st of December 1866.

Date.	No. of Accidents.	Name of Mines.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866.														
Jan. 4		Hady	Chesterfield	Staveley Iron and Coal Co.	William Taylor	Miner	—	Crushed between tub and prop	–	–	–	1	–	1
„ 19		Cottam	Ditto	Appleby and Co.	Benjamin Tomlinson	Ditto	—	Run over on surface	–	–	–	–	1	1
Apr. 17		Loscoe	Ripley	Butterley Iron Co.	William Eyre	Ditto	19	Fall of roof; insufficient supply of timber.	–	1	–	–	–	1
July 5		West Hallam	Ilkeston	H. and B. Whitehouse	George Riley	Boy	11	Fell into shaft 10 yards in depth.	–	–	1	–	–	1
Aug. 13		Ditto	Ditto	Ditto	William Bestnick	Gin boy	10	Ditto	–	–	1	–	–	1
„ 6		Ditto	Ditto	Ditto	Joseph Hibberd	Miner	19	Overwinding	–	–	1	–	–	1
„ 20		Butterley	Alfreton	Butterley Co.	Thomas Steeples	Ditto	15	Overstrained himself	–	–	–	–	1	1
„ 11		Glasshouse Common.	Chesterfield	Sheepbridge Iron Co.	Richard Stow	Ditto	—	Sides of shaft fell out whilst engaged taking bricks out.	–	–	1	–	–	1
								Total	–	1	4	1	2	8

Plan
OF
VICTORIA COLLIERY
DUKINFIELD,
Belonging to
F. D. P. ASTLEY, ESQ^{RE}
IN WHICH THIRTY EIGHT MEN AND BOYS LOST THEIR LIVES
JUNE. 14TH 1866.


FURNACE
UP-CAST SHAFT
DOWN-CAST SHAFT
TUNNEL
OLD MINE
NEW MINE.
PEACOCK MINE
CANNEL MINE.
NEW MINE
TUNNEL TO OLD ENGINE-BROW IN BLACK MINE.

Scale, 60 Yards to an Inch.

EXPLANATION.

Stoppings	H
Doors	D
Directions of Air Current	→
Dotted Lines Fault	—.—.—

Thomas Wynne
Inspector of Mines

Plan
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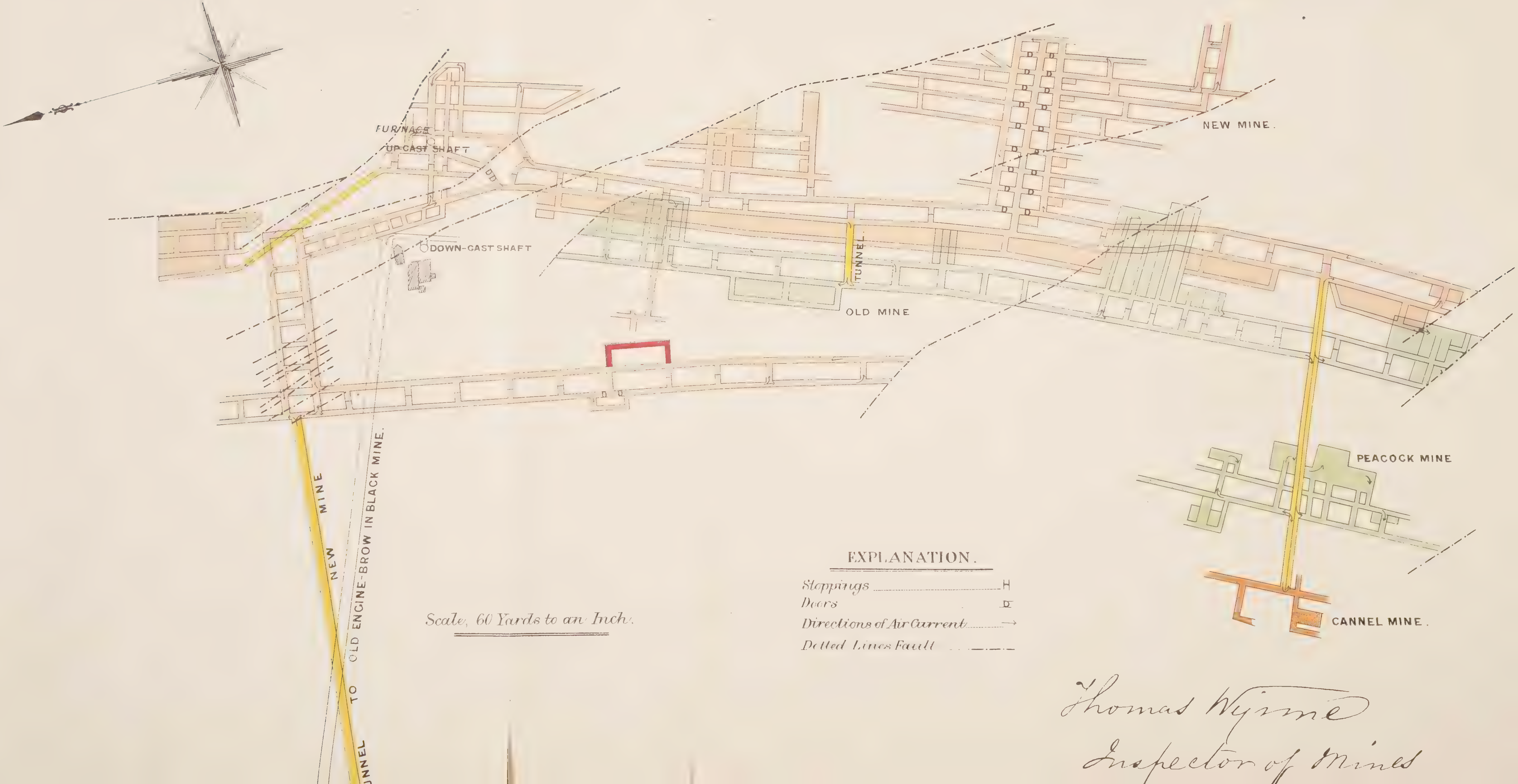
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Thomas Wynne
Inspector of Mines

Mr. Wynne's Report.

REPORT on the INSPECTION of MINES for the DISTRICT comprising NORTH STAFFORDSHIRE, CHESHIRE, and SHROPSHIRE, for the YEAR ended 31st December 1866.

SIR, Stone, February 28th, 1867.

I HAVE the honour to present to you my Annual Report of my proceedings under the Mines Inspection Act during the year 1866, and in doing so shall have to call your particular attention to two of the direst calamities that ever occurred in the district under my charge.

Explosion of fire-damp.

On the 14th June, an explosion of fire-damp occurred at the Victoria pit, Dukinfield, near Ashton-under-Lyne, belonging to and worked by Mr. F. D. P. Astley, by which 38 men and boys lost their lives, and I do not think the cause of this sad accident can be better shown than by the accompanying plan of the workings and the evidence given at the Coroner's inquest, by which it clearly appears that the want of ability and forethought on the part of the manager in charge of the mine has led to this, as it does to most other calamities of a like nature, whether attended by more or less loss of life.

THE COLLIERY EXPLOSION AT DUKINFIELD.

ADJOURNED INQUEST.

The adjourned inquest respecting the deaths of the 38 persons killed by an explosion in the Victoria pit of the Dukinfield Colliery Company, on the 14th instant, was resumed before the coroner for the district, Mr. W. Johnson, at the "Astley Arms" Hotel, Dukinfield, yesterday forenoon. Mr. Wynne, the Government Inspector of Mines, was present, with Mr. W. Bass, agent to Mr. F. D. P. Astley, the owner of the pit. Mr. J. Lord, solicitor, watched the inquiry on behalf of the friends of the deceased; Mr. R. B. B. Cobbett, of Manchester, appeared for the proprietor of the colliery; and the spacious room of the hotel in which the inquiry took place was crowded with persons, chiefly miners, throughout the proceedings.

Mr. Isaac Wheelden said: I have been manager of the Victoria Colliery five years; Mr. Astley is the sole proprietor. He does not take any personal part in the conduct of the colliery, beyond occasionally consulting me. I produce the plans of the workings; they are shown up to the last two months, and very little has been done since. I also produce a copy of the special rules in force at the colliery; they are duly posted in the lamp-house, and every collier has a copy. The down-cast shaft is 340 yards deep, leading to the Black Mine. It is in connection with the up-cast shaft for the purpose of ventilation. The workings extend 600 yards, on a level from the up-cast shaft, in a southerly direction. Those on the north side are finished; they extend 350 yards. This portion of the pit is abandoned, in consequence of a fault. In a westerly direction the workings extend 150 yards, on a dip of nearly 2 ft. in a yard. A new air-hole is now being made in this direction, for the purpose of ventilation. This will communicate with the deep workings. The deceased were employed in the mine on the morning of the explosion. George Phillips (deceased) was the sole underlooker, and had entire charge of the underground workings. There were two firemen under his supervision; namely, John Moores and Joseph Wirrell. Their duties were to attend to the ventilation, under Phillips, and to inspect the mine before the colliers commenced work. This took them about two hours in the morning, and then they attended to the roads. They were day-wage men, and did not get coal. The miners worked by night and day shifts, but fewer men were employed in the night, often not more than four or six. On the night preceding the explosion, Joseph Wirrell was at work. He left at 6 o'clock on Thursday morning; Moores succeeded him, and met him there. I was last in the mine about a week or a fortnight before the explosion. I went to see how the furnace at the bottom of the up-cast shaft was operating. It was put down about seven weeks ago; there was not one previously. After the furnace was set to work, the air passing to the workings was measured by Phillips, and he reported to me that 15,000 cubic feet went through per minute. The anemometer was worked five minutes, and 15,000 cubic feet per minute was the average. The cause of the difference in depth between the down-cast and the up-cast shafts is, that the up-cast is driven to a deeper level. There is a fall from the down-cast shaft to the workings in connection with the up-shaft. There were some old workings in the New Mine which communicated with the down-cast, about 500 yards in length, but those workings had not been in use for the last three years. Parallel with the upper level, a third level has been commenced, and driven 30 yards, with thrills at each end, communicating with the higher level, of about 15 yards each. The third level was not completed, and gas had accumulated in it. There was bratticing fixed at a certain point, with the view of preventing this; and a new air-brow was being driven to the third level, and was within ten or a dozen yards from it when the explosion occurred. I directed Phillips's attention about seven weeks ago to a point where I felt sure gas would be accumulated, and told him that he must take means for removing it, before the level was tapped by the new air-brow, and that he must do this some night when there was no work going on. There would be 4,400 cubic feet of gas in the third level and the two thrills. This had been accumulating during the three years in which these levels had not been working. I felt certain there would be gas there. When the explosion took place on the 14th inst., I was about half a mile from the colliery. I hastened to the pit, and descended the shaft. I found that the two air-doors were blown down in the horse level, and the air, instead of going into the working, was ascending the up-cast shaft. The coal waggons were broken, and driven upon a heap. I made a temporary stopping, and turned the air into the workings as soon as I could. I then went forward into the workings and found a dead body about 80 yards from the shaft. From that point, proceeding along the horse level 240 yards, I passed 11 bodies. I examined each, to see if there was life remaining in any. Proceeding about 100 yards further up the horse brow to the jig brow, I found the remainder of the bodies, namely, 27. I examined the pit the next morning, and I believe the explosion took place in the horse road, at a point about 140 yards from the up-cast shaft. Four of the men among the 27 were burned; and also the horses in the jig brow; but I do not find the coal showing any signs of fire. The drivers in the horseway were allowed to have naked oil lamps. I found a lamp lying on the floor, and the gauze of it hanging up. All the miners are required to work with locked Davy lamps. It is the duty of the firemen to see this done, and no man is allowed to have a key. I believe a brattice had been placed at both engine brows, and the bulk of the air had been turned into the two levels on the dip, and would sweep the gas from the third level into the horse road and to the workings where the men were employed. The Davy lamp, with the gauze hanging up, was used at a place where open lights were not allowed. The levels where the explosion took place were 7 ft. wide, by 4 ft. high.—[Mr. Wynne remarked that the velocity at which the gas would pass through the thrills would be 536 cubic feet per minute.]—Witness continued: A fortnight before the explosion, Phillips, the under-looker, reported to me a fall of earth at the end of the Black Mine tunnel. I told him to get some men and have the road made right. I had previously inspected an obstruction in the air-way, as the air passing was below the quantity which I thought the furnaces should draw. Phillips said the earth was nearly up to the top of the tunnel. On the day after the explosion I examined the tunnel, and I found they had made an opening for air and water about 3 ft. by 2 ft. and there was a small opening above the rubbish through which the air could pass. By Mr. Wynne: Phillips never reported to me having found gas in the part where I believe it existed. Phillips had been employed about 12 months at the pit and had previously been a practical miner. Nobody ever told me that men were afraid to work in the pit, or of getting to the part where there was gas. I consider I had done my duty when I told Phillips to remove the gas. It was an easy matter to accomplish, and I could have cleared it in five minutes. There was nothing practical to prevent the removal of the gas when the men were out. It would have remained where it was, unless some one had interfered with it. There was also a little gas at the top of the New Mine workings, but men were not employed there. It has been reported to me that there was gas in the Peacock and Cannel seams, and that the men had been brought out. The gas from these mines would have to escape through the new workings, but it was done at night, when no men were employed.—By Mr. Lord: I was in the pit about a fortnight before the explosion, and, to the best of my recollection, I was down within a fortnight previously to that time. I do not recollect John Hodgson complaining to me about gas being in the pit, six or seven weeks ago. I might have asked the men, after the furnace was put down, whether the air was better. There are day-wage men employed, who are not firemen. I cannot tell how many bricked-up walls there were in the thrills; several are thrown down; but there were better stoppings than brick and mortar.—By Mr. Cobbett: I learned that 15,000 feet of air per minute passed into the workings, but I did not consider that sufficient, and therefore I directed Phillips to search for any obstruction, and he found the fall of earth previously referred to. I believe the explosion was caused by some one placing an obstruction which diverted the current of air, and drove the gas from the old working of the third level into the horse way, where the men were at work with naked lights. I have always found my instructions attended to after being given.

Martin Birtenshaw said: I worked at the Victoria Pit, and was in at the time of the explosion. I worked in the new air-brow, from the new mine to the old pit. I went down at ten minutes past six. I saw Phillips at the top before I went down. James Hamilton, who had been working all night, said there was no air travelling. Phillips did not hear him. When I had been at work some time, my light went out, and stones fell from the roof. I and some others went up towards the horse way, but when about 18 yards from the horse level, the damp was so bad we could go no further. We then went to the bottom of the brow, where there was some water, and remained until two men came and rescued us.

Joseph Wirrell said: I have been fireman since March last, and was previously a coal miner in the same pit. I was on duty the night preceding the explosion. I left a little after six o'clock on the Thursday morning. When John Moores, the other fireman, came down, I went up. I told Moores the workings were all right, except in one or two places which would fire at the lamp. One was in the top level, on the north side of the jig-brow. I saw Phillips when I went out of the pit, and he said he expected the miners to be getting through to the third level with the air-brow. I recommended him to get some boring rods to bore with, and then plug the holes up until they could drive through to the level.—By Mr. Wynne: That (Wednesday) night I went into the Peacock and Cannel Mines, and I found a little gas where William Meller worked; it was also in two thrills, but I cannot tell the length of the thrills. This was on the south side, and they were several yards from the level. On the north side there was a place that would just fire, near William Harrott's place, in the Peacock Mine. In order that this gas might escape, it had to pass through the new workings, but it would be at night when the men were away. I had not to make my reports to Mr. Wheelden, the manager, but to Phillips, the underlooker. I cannot say how many brick stoppings there are in the pit, but there are some in the levels. I never said anything to Mr. Wheelden about the air; but a week since on Tuesday I told Phillips that the air was slack. A little more than a fortnight ago Phillips said there had been a fall in the tunnel, and I and Moores went to clear it of the dirt. There was no air passing, except through the loose dirt at the top. Before we left I could creep through on my hands and knees. I told Phillips we could make it no better, and that a fresh air-road would have to be made; but it was not made before the explosion. On the Friday before the explosion I gave notice to George Phillips of my intention to leave. My reasons were because I wanted more wages for myself and boy, and because the air was slack and the air-holes such as we could only creep through; they were too strait. My chief reason was the want of more wages. I often complained to Phillips that there were too few day-wage men to keep the roads clear, and when I gave him notice he said he could do with 20 more.—By Mr. Lord: Phillips said that there was not stuff enough going out of the pit to pay for so many day men.

John Moores said: I am a fireman, and have worked in the Dukinfield pits 19 or 20 years. I went to the Victoria mine a few minutes before six on Thursday morning. I saw Phillips at the bottom, and asked him "Where must I go to day." He said I must go down to "forty," and leave my dinner and bottle at this end of the tunnel. He said I must go down the back brow, I should see a sheet hanging by one nail. He afterwards told me to go to "forty," where the break-down of earth had been. In about 20 minutes after this, and within 300 yards of the break-down, the explosion took place. It did not blow my light out. On Wednesday afternoon, Phillips hung a new sheet across an old one, at the bottom of the south brow, to stop the air from passing along the south brow. I crept under it. He asked if I had left the sheet as I found it, and I said I had. On Thursday morning Phillips said he would come down the tunnel to me, and I must go with him along the back brow, to nail another sheet up.—By Mr. Wynne: I did not know what state the sheet was in on Thursday morning. I did not place it up, but I passed under it on Wednesday night. He told me he had made up one of the brows on Wednesday, but he did not tell me to go and turn the air with the other sheet. The sheet that Phillips put up was blown down by the explosion, as I saw on visiting the pit afterwards. I did nothing with the sheet on Thursday morning, and cannot say what caused the explosion.

Mr. John James Horsfall said: I am manager of the Fairbottom Colliery, near Ashton. On hearing of the explosion I went to the pit, taking with me an under-looker, to render what assistance I could. We descended the shaft, and on examining the horse level, I found the doors blown down, and a screen fixed in their stead. The roof of the horse way was very insecure, and we got men to make it good. Several dead bodies were found, and I assisted to remove them. I went to the bottom of the new mine brow, and along the No. 2 tunnel to the old mine door, and then returned to the shaft. I afterwards examined the mine, to ascertain the cause of the explosion. My opinion is that the gas had accumulated to a considerable extent in the No. 3 level, which was about to be tapped by a new air brow, and that the air, having been improperly turned in at the lower level, had driven the gas into the new workings, and it fired in the horse way. It was very unwise and dangerous to allow gas to remain so long, in such a large quantity, in one place. I think an hour would have been sufficient time for clearing out the gas.—By Mr. Wynne: My belief is that there was no necessity for allowing the gas to remain, and that, after removing it, the ventilation of the mine might have been restored in ten minutes. I am clearly of opinion that the north and south brows had each been bratticed at the end, and the whole body of air and gas driven through to the lights in the horse way.

Thomas Jones deposed: I am a coal miner, and live at Pendlebury, but worked at the Victoria pit on the occasion of the explosion. I have since left. On the morning of the explosion, Phillips, the under-looker, to go into the air-hole, No. 40. It wanted cleaning, and a proper road making. I went there, and James Normington accompanied me. We went to the top of the timber, and began to throw the earth from the couplings. We had only been at work a few minutes when the explosion took place. It was only the second morning of my working in that pit. I knew nothing about any accumulation of gas in the third level.—By Mr. Wynne: When I went in the first day, there was an opening in the tunnel of about a yard by a foot wide, and a little air drew over the top of the couplings. The air passed very quickly through the hole, and we could scarcely keep the lamp in.

James Normington said: I am a coal miner, living in Dukinfield. I was in the pit at the time of the explosion, and had commenced to work a fortnight previously. On the afternoon of the first day that I worked there, which was June 5, I saw Phillips, and he told me I must come again at eight o'clock that night, and go with John Moores down to the 40. He said the tunnel had fallen, and we must open it. We both went, and found the road blocked up by the fall, but there was a little air passing through the rubbish. We threw the dirt back, and by working all night we got a road through by morning, so that we could get through. We dare not then make the hole larger, lest the loose earth above should break it in again. The fall was about two yards long. We worked every night until the Saturday morning, when we had made it good. We put timber along the top, and built the walls of shale. On Monday morning we began "foot-ridding," making the road larger at the bottom, and continued to do so until the explosion took place. Jones was at the top of the couplings, clearing off the dirt, and I was throwing it back at the time of the accident. The first fall was about 8 cwt. of earth, but this would not interrupt the passage of the air, or divert it to the third level. The explosion knocked me down, and blew my light out. As to ventilation, I consider there was plenty of air when the tunnel was opened.—By Mr. Wynne: Every night that we made an opening through the rubbish, we found it filled up again when we went next night, until Saturday, when we made it good. Jones was on the couplings when the explosion happened, but his light was not blown out.

Joseph Kay, collier, said: I had worked at the pits three weeks before the accident happened, but was absent at the time of the explosion, having received a slight injury. I was employed in driving the brow to communicate with the third lower level. I was aware there was gas in that level. When I met with my accident I think the brow was about ten yards from being driven through to the level. Phillips took the measurements every fortnight, from the horse road to the end of our workings in the brow. Had a miscalculation been made, and we had tapped the level, the gas would have escaped through the opening into the horse road, and caused an explosion. I was aware of the danger, but did not think it necessary to ask for boring rods. I did not complain about the gas in this place, but I complained to Mr. Isaac Wheelden, the manager, about twelve months ago, and also about seven months ago, of gas in other parts of the mine where I was working, and he said to me, "Joe, what did you come out for yesterday?" I told him "I met with a fault that made a deal of sulphur." He said he thought I wanted to do Phillips, the underlooker, an injury, but before he would part with Phillips he would part with every one of us. I told him I did not want to work in a place where I could not be safe. I said no more about gas, believing that I should lose my place if I did. The measurements I have mentioned did not show how near we were to tapping the level where the gas was, but the number of cubic yards of earth removed, so as to fix the amount of wages due. We had 3*s.* per yard.—By Mr. Wynne: When I complained to Mr. Wheelden, I was driving a brow near to the shaft. He never came down to see whether my complaint was true or not, but Phillips and the fireman did. The faults there when met with gave off a deal of gas. We used open lights in the air brow where we were working, as also in the horse road.—By Mr. Lord: Dirt stoppings are not air-tight. The stoppings should be of brick and mortar. I worked in the lower levels three years ago. We put no brick stoppings in the thrills, they were of earth and small coal. This weakened the current of air.—By a Juror: The floor in the new mine does not lift, and the roof is strong, and will not settle to make it air-tight.—By Mr. Cobbett: The last time I saw the stoppings in the third level, they were of earth; I have not seen them since. I cannot account for Mr. Wheelden having said that I wanted to do Phillips an injury. I had no quarrel with Phillips.—Examination continued: The ventilation of the pit was good four or five years ago; but it grew worse as we got further from the shaft.

John Hodson, coalminer, Dukinfield, said: I have worked in this pit about two years. I was working in the Peacock mine, which was a part of the same colliery, when the explosion took place. There was good air in the colliery before the little mines were commenced. I mean by "little mines" the old mine, the Peacock mine, and the cannel mine. These mines (seams) were started about eighteen months ago, and there has been very little air since. John Moores was fireman of the day shift, and Joseph White of the night shift. They have been four days together without examining my seam, being engaged in other parts of the mine. About eight or ten weeks ago I had to come out of the Peacock mine, the seam being full of gas. Another man and a waggoner came out. We saw Mr. Wheelden at the top of the pit, and he asked why we had come out—it was the third successive day we had done so. We told him the place was full of sulphur. He said the furnace would be got in soon, and that would mend the air. About seven weeks since, I saw Mr. Wheelden at the top of the pit, and he asked if I had any better air, and I said "It is worse." He said he did not know how that was, for more air was coming up the shaft. I have never seen Mr. Wheelden in any part of the mine where I have worked.—By Mr. Wynne: During the last six months that I have worked in the Peacock mine it has never been properly ventilated. We could scarcely feel a current on the bare skin. I work on the north side of the tunnel, and should get the air first, but it did not keep my take clear. I am not certain whether a fireman had been in my part on the morning of the explosion.

John Bates, miner, said: I worked in this pit three months since, and was a jobbing fireman. The furnace was not then put up, and the ventilation was very bad. What stoppings I have seen in the lower levels were of dirt, not of brick. I am only aware of two brick stoppings in the new mine; I built one, and Moores the other. I have seen the men have to come out of the Peacock, the old, and the cannel mines, on account of the accumulation of gas. I had to do other day work, as well as inspect the mine. Phillips knew that I had often to be away from inspecting, and Phillips had to work as well, so that he could not attend to the place. I complained to Phillips that the men were short of air, and told him some bratticing ought to be got. I afterwards saw Mr. Wheelden, and he asked me if I was going to brattice the pit round. I said, "Is it not lawful?" He said the law was not made for every place. I had drawn his attention to one of the rules. The bratticing I requested was not put up.—By Mr. Cobbett: I was discharged by Mr. Wheelden's orders three months ago. The underlooker said I had not done my duty. I refused to go down the mine alone at four o'clock in the morning. To do this is contrary to one of our trade rules. I was discharged about six weeks after I spoke about the bratticing. A week before I was discharged I told Phillips there would be an explosion if something was not done. I was not aware of the gas in the third level, but I consider there were worse places for gas than that. Workmen often complained to me, and I mentioned their complaints to Phillips.—By Mr. Wynne: I left because I did not like to work in the pit. There was no air and no regulations.

Mr. Folkes, surgeon, Dukinfield, said: I went to the pit on the morning of the explosion, and saw the body of John Lomas. He had died from choke damp. I saw the others and believed they died from the same cause.

James Ramsbottom produced a lamp used by Samuel Moores on the night preceding the explosion, which was burned into holes.

Samuel Moores said: I worked two months in this pit with the broken lamp produced. I bought it at a pawnshop. We find our own lamps, but the gauze is provided by the master. It has been in its present state about three weeks. I applied to Phillips for another gauze; he said he had no gauze that would fit it, but would see if he could get one. On the morning after the explosion the fireman gave me a new lamp. The lamp I had before was no protection whatever. I showed it to Phillips, and used it for three weeks. I was in the night shift, and worked in the tunnel.

Mr. Thomas Wynne said: I am inspector of mines for the district in which the pit is situated. Hearing of the explosion I came to Dukinfield, and inspected the mine on the following morning. I found a very heavy fall not far from the shaft; and that both the doors had been blown away which turned the air from the horse road to the up-cast shaft. The ventilation was restored, and I proceeded up the horse way, following the course of the air. The air goes down the old Black Mine pit, which is 340 yards deep, then down the old Black Mine brow, for 500 yards, then back along the tunnel 300 yards, then up a brow 100 yards, and along the slant from 90 to 100 yards, having to travel about 1,000 yards before it gets into the workings. I perceived at the near end of the tunnel, that two levels had been driven in the new mine coal about 400 yards, and above those a third level 30 yards in length, and a thrill at each end of 15 yards deep (coloured red on plan). This was reported to me to have been full of gas before the explosion. The manager, Mr. Wheelden, stated that the third level was known to be in this state, and he told me that he had instructed Phillips, the underlooker, to clear it of gas, lest the men should thrill into it. I asked the manager if he had told Phillips how to clear it, and he replied that he had not. He had told him to remove it, and that was all he had to do with it. He said the gas had been there for some time. My calculation is that there would be about 4,000 cubic feet of gas confined there. I have never investigated an explosion the cause of which can be more clearly defined. It either exploded at one of the naked lights at the top of the brow that they were driving, or else at one of the open lamps in the horse way. All the persons engaged near the horse way were burned, and so were the horses; those working at the top of the new mine brow were not burned but suffocated. The blast had been from the shaft towards the workings, as was also shown by its effect upon the woodwork. From what I heard of the gas being accumulated in the third level, I am clearly of opinion that it had been dislodged by turning the air upon it. If the pit had been left in the same state before the explosion that I saw it on the morning after, the explosion would not have taken place. The current had been improperly diverted. I found nearly at the bottom of the north air brow, that a sheet was hanging down by a nail, and that every crevice round the frame had been recently stuffed with hay to prevent any escape. At the bottom of the south brow I also found a sheet lying down. Assuming the sheets to have been put up, the effect would be to drive the air through ~~the~~ three levels, thus forcing the gas from the third level to the naked lamps in the horse road. Moores had stated in his evidence that the sheet at the bottom of the south brow was never put up, and if that statement is to be taken as correct, I cannot account for the gas being driven out. It was dangerous to have gas confined in the way it was, and nothing could be more simple than its removal. It should not have been allowed to remain one night after the discovery of it. It could have been cleared in ten minutes or a quarter of an hour. To drive the air brow was also dangerous, while the gas was in, since, had the third level been tapped, an explosion must have occurred. I consider the manager neglected his duty in not seeing that the gas was removed. Any accidental interruption at the same place, such as a fall of earth, would have produced the same effect. There is gas in various parts of this mine, and the current is so conducted as to pass over the men with naked lights. By Mr. Cobbett: This was called a "fiery mine;" but I do not consider such mines dangerous if properly managed. More die by falls of roof in collieries than by explosions. Last year there were 168 persons killed by explosions, and 381 by falls. When I last inspected this mine it had been but recently opened. It was several years ago. I had not inspected it since because its state had not reached my ears. If I had recently inspected it I should have reported its dangerous character to the owner, and I have no doubt this accident would not have occurred. It is a mistake of the owners of pits to suppose that it is our duty to inspect without being required. If I had a day to spare I might have called at this pit or any other. I have 300 pits under my charge. If the managers were efficient, the inspectors are sufficiently numerous, and owners have no right to suppose that Government should perform the duty of managers. By Mr. Lord: With proper appliances, this pit could be made as safe as any in England; and I consider that there has been a great improvement in the general management of collieries, for the get of coal has doubled without the accidents increasing. There can be no doubt that the pit is in a very bad condition as regards ventilation.

This being the last witness called, the Coroner made some observations upon the evidence adduced. He said he thought the jury would have no difficulty in arriving at a correct conclusion as to the cause of the accident. The primary cause was evidently a large amount of gas having found its way into the horse road, where naked lights were regularly used. They would probably have little difficulty in coming to the conclusion, that, from some cause, the air had been suddenly turned into No. 1 level, whence it passed into No. 3 level, which was filled with gas. This would then be forced into the workings, and over the men's naked lights in the horse way, where the explosion had occurred. There was no satisfactory evidence as to how the air became so diverted, but it had been shown that Phillips, the underlooker, and Moores, the fireman, contemplated removing the accumulated gas in a very short time. Phillips had placed a brattice in the north brow, and Moores was instructed to get one ready for the south brow, but he swore it never was put up. The putting up of those brattices, however, was evidently consistent with their intention, and it was the opinion of Mr. Wynne, after seeing the sheets on the morning after the explosion, that they had been put up, and had caused the diversion of the air which took the accumulated gas in the third level to the horse way, where it ignited. They had now to deal with the grave question whether any one was criminally responsible for the deaths of the unfortunate men. Mr. Wheelden, as manager, had accepted the responsibility of superintendence, and was bound to observe both the general and special rules relating to collieries. It was his duty to see that the ventilation was in a state to allow of men working with safety. With regard to the pit itself, it would be observed that the gas had not exploded at any of the faces of the coal where the men were working. It was said that if the confined gas had been let alone, the explosion would not have occurred; but neither would it have occurred had the gas not been allowed to accumulate. Mr. Wynne had told them that it should have been removed as soon as it was known to exist; and Mr. Wheelden had stated that he told Phillips to remove the gas, but took no further notice of it. The witness Bates had applied in vain for bratticing to make where he worked safer. Phillips, the underlooker, was dead, and the firemen under him appeared to have had other duties to perform besides those of inspection. It would be for the jury to consider whether the manager had shown reasonable care and skill. If they believed that he told Phillips to remove the gas, that would to some extent relieve him of responsibility. They could hardly suppose it was from an idea of economy in not stopping the work, for Mr. Wynne had told them that the gas could have been cleared in ten minutes, which could have been arranged between the shifts. If they were of opinion that the manager had acted under an error of judgment by believing that there was no danger, then they would find a verdict of accidental death.

The room, which had been filled during the proceedings, chiefly by miners, was then cleared. The jury deliberated an hour, when the Coroner announced that they had found, in effect, a verdict of accidental death; but further wished to state their opinion that the general management of the pit was characterized by great negligence and incompetence, but not sufficiently gross to fix the manager with criminal responsibility.

The inquiry closed at half-past five o'clock, having lasted more than seven hours.

On the 13th of December the explosion at Talke o'th' Hill again alarmed the whole community by its fatal effects, no less than 91 persons having lost their lives out of about 150 who were in the pit at the time. In this case too it is perhaps the best way to give the plan of the workings and the evidence taken before the coroner's inquest, as further inquiries do not at all tend to alter the conclusion then arrived at or to exculpate the underground manager from the serious charge of pushing on working places without the means of proper ventilation, and of allowing the discipline of the pit to fall into the lax state that must sooner or later result in such barefaced disobedience of the special rules as to lead to some serious fatality to the men employed. In this case, as in most others, great stress was laid on the fact of finding a lamp with the top off, and a man with a pipe in his hand; but to these facts but little importance need be attached for how can working men be fairly accused of recklessness and temerity when those above them see what is going on and neglect to adopt any means to prevent such illegal and highly dangerous practices.

Evidence given before the Coroner's Inquest touching the Deaths of Nicholas Fletcher and 90 others, who were killed by the Explosion at Talke o' th' Hill Colliery on the 13th December 1866.

Mr. George Johnson, the company's general manager, was called and examined. He said—I have been general manager at the colliery in question for ten years. Thomas Nicholls has had the management of the underground department for seven or eight years. He was on the works at the time of the explosion. There were two firemen on that turn—James Sharples and Samuel Kenyon. James Bossons and George Hicks were the night firemen that week. Hicks had taken Sharples's turn on that day, the latter having hurt his shoulder. I heard the explosion as I was coming down the steps of my own house. I went to the works directly, seeing the smoke coming up the pit. The noise did not particularly attract my attention. Nicholls was the first person I met on the pit bank. No mischief was done to the machinery, and under the hour persons descended. Nicholls went down first, and I think he went alone. (Plan of the workings produced.) The colouring on this plan is made up to the end of September. The plan was made by Mr. Cope, surveyor to the company.

By Mr. Wynne.—Nicholls took the responsibility of the underground workings, unless any considerable expense had to be incurred, and then he consulted me. If anything were done in the pit which ought not to be done he would be responsible. Supposing it were necessary to have a second pit down to the bottom, the directors would look to me to see that that was done, and so far I should be responsible. As general manager I should have to see that Nicholls did it. Nicholls would use his own judgment as to the driving of levels. As far as the general management is concerned I am not held responsible for what is done in the pit beyond the sinking of the shafts.

By the Foreman.—Nicholls was not in the Banbury seam that morning because he visited the several workings on successive days.

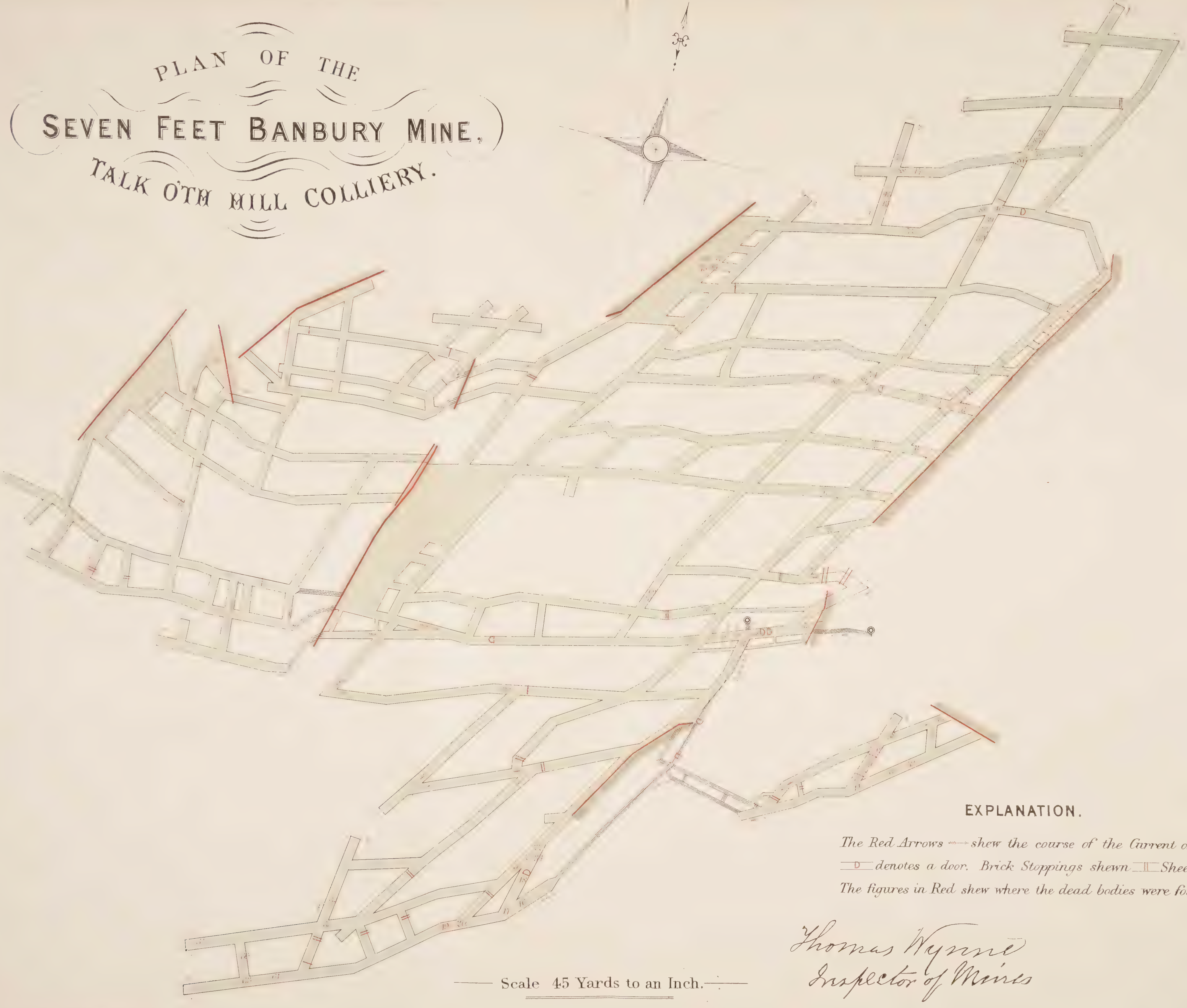
By Mr. Wynne.—I do not keep a register of the state of the pit, nor are any reports brought to me in writing. I have had reports as to the quantity of air passing into the pit, but not very often with respect to the Banbury workings, because they are new. I have not had reports every morning. The last report before the accident was made by Nicholls on the evening of Tuesday the 11th of December. He reported verbally that he had been in the workings and had found them all right.

By a Juror.—We have a scientific apparatus to indicate the state of the air, and do not trust entirely to our own judgment. As a rule it was under Nicholls's management.

Thomas Nicholls said—I have been underground manager at this colliery seven or eight years. I have to see that all is right in the workings, and that the rules are properly attended to. I was last in the works, before the explosion, on the Tuesday afternoon, and in that part where I believe the explosion took place. I saw nothing at all wrong in that place, but all was clear. If the fireman finds anything wrong when he examines the pit in the morning the overman sends me a note up. No note was sent up on the morning of the explosion. I got to the pit that morning at about six o'clock. I believe the workings were examined that morning by Samuel Kenyon. He is dead. Had he failed to do so it would have been the duty of Nicholas Fletcher, the overman in the pit, to report him for a breach of the 20th rule. The colliers themselves would expose neglect of this kind. I have never received a report that any fireman had failed to perform this duty. Shortly before the explosion I was going down with Wilkinson and Billington, but was called off for a moment. They went down, the explosion took place, and they were killed. As soon after the explosion as possible I made arrangements for the men to come up the other shaft, and then prepared to descend the shaft up which the smoke caused by the explosion had been driven. I shouted down and was answered, upon which I went down the shaft. That was certainly under an hour. When I got to the bottom I found a number of living men there, and I sent them up as fast as I could. I think there were four or five cage loads, and there might have been 20 or 30 men. The men were not permitted to use naked candles, but safety lamps were provided. James Oldfield was the lamp-man that morning, and it was his duty to see that the lamps were locked before he gave them to the men. They were locked by a direct screw. When the colliers finish work they deliver their lamps up at the lamp office on the pit bank. Each lamp is numbered, and every one has his own number. Gunpowder was used for blasting in the workings in which the explosion took place. It was the duty of the firemen to see that the blasting was properly carried on. Gunpowder is used every day and every night as occasion requires. I do not think that blasting had anything to do with the explosion, for no shots had been fired recently, nor were any ready to be fired. I am not aware of smoking having been practised in the pit. I have never received a report to that effect. I have never smelt smoke in the pit. There is a rule prohibiting smoking.

By Mr. Wynne.—The down-cast shaft is 11 feet in diameter, and the up-cast shaft is the same size. The first working you come to, at a depth of 160 yards, is the Ten-foot, where about 20 men were employed. The in-take there was 5 feet 6 inches by 7 feet. In November last I measured the quantity of air going in there, and found it 18,000

PLAN OF THE
SEVEN FEET BANBURY MINE,
TALK O'TH HILL COLLIERY.



EXPLANATION.

The Red Arrows ⟶ shew the course of the Current of Air

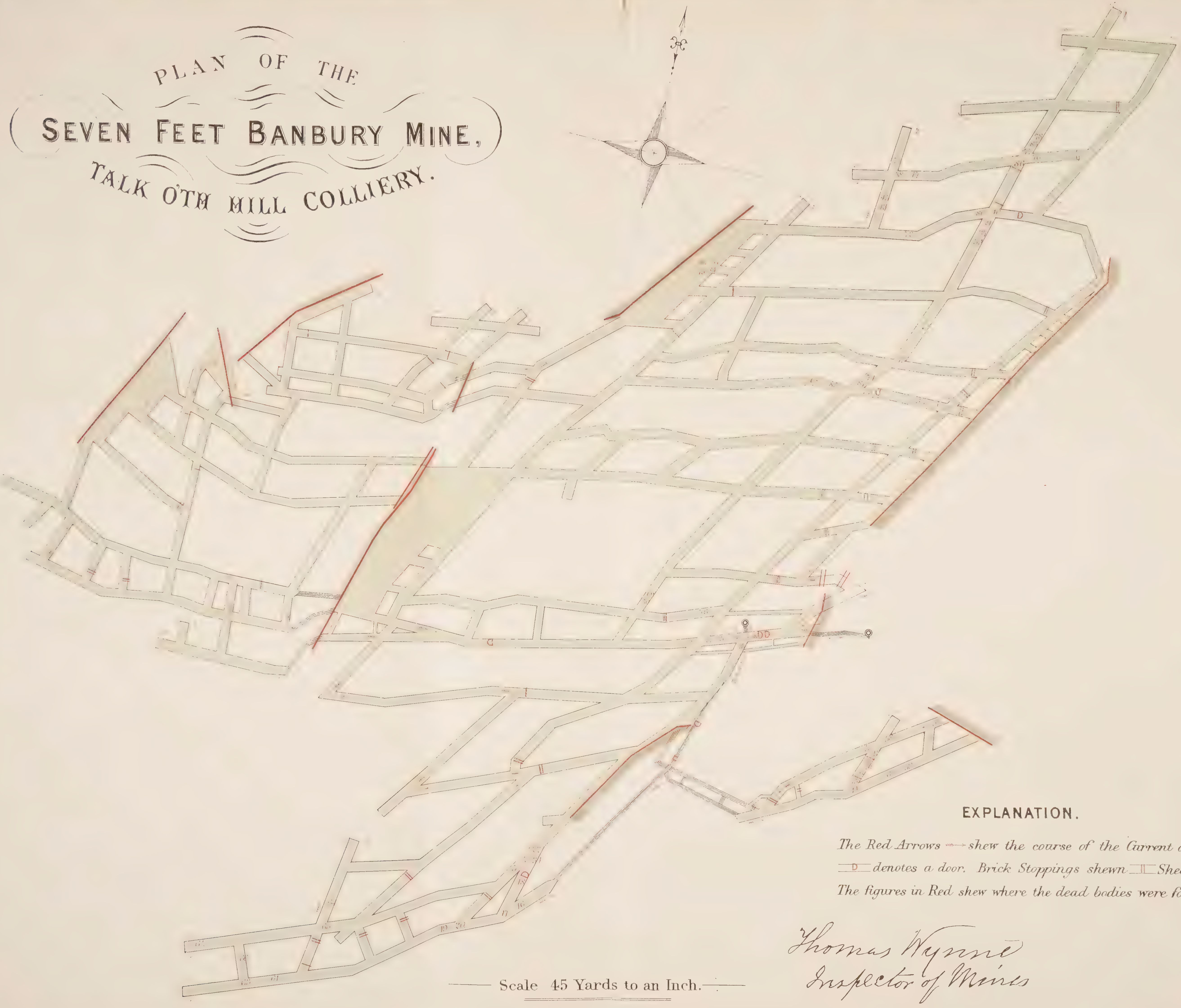
D denotes a door. Brick Stoppings shewn ‖ Sheets |

The figures in Red shew where the dead bodies were found.

Thomas Wynne
Inspector of Mines

Scale 45 Yards to an Inch.

PLAN OF THE SEVEN FEET BANBURY MINE, TALK O'TH HILL COLLIERY.



EXPLANATION.

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cubic feet per minute. The Truro are the next workings, and they are 200 yards deep. The in-take there is 5 feet square, and the quantity of air going in was 9,000 cubic feet per minute. Fourteen or fifteen men were employed there. No complaint has ever reached me of the men being short of air in the Truro workings. Five hundred yards was the greatest length of these workings. There was a furnace to each of these workings. The opening into the Seven-foot, where the explosion took place, was 6 feet by 6 feet 6 inches, and the depth was nearly 300 yards. In the up-cast shaft the opening into the Ten-foot was 10 feet by about 5 feet 6 inches, and into the Truro 10 feet by 8 feet. There was an opening into the up-cast shaft from the Seven-foot. There was an opening at the mouthing from the Seven-foot into the up-cast shaft at the time of the explosion.

Mr. Wynne.—Taking the main level was there an opening into the up-cast shaft?

Witness.—No, but there was a travelling-road leading from pit to pit.

Mr. Wynne.—Was there an opening into the up-cast shaft?

Witness.—Yes, but it was fastened up with two doors.

To a Juror.—They were fastened up in order that the air might go where we wanted it to go.

Mr. Wynne.—Under whose directions was it that the pit was left at the Seven-foot level instead of being sunk to the bottom?

Witness.—I suppose it was a joint direction.

Mr. Wynne.—But who is responsible for it?

Witness.—I do not know how that would be. We considered there was no need to sink it.

Mr. Wynne.—But who is responsible for its not being sunk?

Witness.—I suppose I am responsible to a certain extent. Between the main level and the high part of the workings of the Seven-foot some eight or nine places were bratticed. Some time ago there was water in the jig below, and it was got out on the 11th of August last. We then found that the front jig was not in a very bad state, and we cleansed it out and used it for sending coal down. The back-brow was, however, swollen up badly with the water, and a man could only just crawl over it. We did not cleanse that. I believe Fletcher went through about two months ago, and certainly within three months.

Mr. Wynne.—Knowing that, who is responsible for driving the bottom levels?

Witness.—I suppose I am.

Mr. Wynne.—Then you did not consult Mr. Johnson about it?

Witness.—I told him what we were doing. I generally tell him about those things.

Mr. Wynne.—I want to know whether you hold yourself or Mr. Johnson responsible for continuing those levels after you knew that the air-road was stopped up?

Witness.—I suppose I am responsible.

Mr. Wynne.—After that what means did you take to ventilate the far end?

Witness.—I had plenty of wind coming down, so I placed a door here (*pointing to the plan*) to assist the ventilation. That was on the main jig.

Mr. Wynne.—You considered the putting a door there was sufficient?

Witness.—Yes.

Mr. Wynne.—What was the length of the jig?

Witness.—About 23 yards.

Mr. Wynne.—Tell us what quantity of coal you sent down that jig in 12 hours?

Witness.—Something like 150 or 200 tons. Seven tubs were sent down each time, and seven brought back. I have made no calculation of the length of time the door would be kept open while these tubs were passing through. It would only be for a second or so, on account of the great speed at which the tubs travelled. In addition to this another door was put up. I opened the Seven-foot up towards the east on my own responsibility. I did not find an extra quantity of gas there. At one time the air would be, 100 yards higher than its outlet, and would require pulling down that distance. The state of the lower level was good on the Tuesday before the explosion. There was no gas at all there. My orders were that the men were not to work where there was gas. Only on one or two occasions have I received complaints of the presence of gas in the workings. There was once a little gas in the bottom level, but work was stopped, and it was cleared away in about twenty minutes. That was some time ago, and the place has been right ever since. The gas was caused by the drop sheet being down, and the fireman put it up again. I went into the mine two or three times every week.

Mr. Wynne.—Now, Nicholls, you can please yourself whether you answer this question or not. Did you not know there was smoking constantly going on in the pit?

Witness.—I did not.

Mr. Wynne.—Did you not know that the men had false keys to their lamps?

Witness.—I did not.

Mr. Wynne.—Was that circumstance never reported to you?

Witness.—It never was reported to me.

Mr. Wynne.—Do you know whether they had or had not?

Witness.—I have heard so since the explosion.

Police constable Beckett here produced a bunch of 23 lamp-keys of various kinds, and some of a very rude description. They were all found upon men who were killed. In one case two nails were fastened together; but there were two or three which looked like regular lamp keys made for two different descriptions of locks.

Mr. Wynne to witness.—How do you account for that number of keys being found upon the men, and yet you say it never came to your knowledge that they had any?

Witness.—They would be concealed from me. I never knew that they had any at all.

The Coroner to Beckett.—Can you identify any key as having been found upon any particular person?

Beckett.—Yes. This (*taking up a key*) I found in the pocket of Thomas Berisford.

A Juror.—I can furnish the names of the owners of a number of the keys, if necessary.

Mr. Wynne.—Now as to the firing of shots?

A Juror.—But we have not yet done with the keys.

Chief-Superintendent Sweeting.—Is the lamp-lock an ordinary one, because if so it is a bad one?

The Coroner directed a lamp to be sent for, and upon its being produced it was found that it might be opened very easily.

The Coroner to Beckett.—Have you inquired who made these keys?

Mr. Evans.—They may be bought at any ironmonger's shop.

The Witness by a Juror.—The firemen and the overmen were the only persons allowed to have lamp keys in the pit. Berisford had no right with a key. The firemen had keys, because it was their duty to relight the lamps if they went out.

By Mr. Wynne.—The firemen were the only persons authorized to fire shots, and they did so after ascertaining that all was right. Fletcher, the overman, was also authorized to fire shots in going his rounds. It has never come to my knowledge that other men have fired shots. The firemen would sometimes find two or three shots close together, and then, when he had seen that all was right, he would sometimes let the men apply the touchpaper. Beyond that it had never come to my knowledge that the men fired their own shots. The men have sometimes grumbled because they have had to wait for the firemen. No man has ever complained that he had had to wait an hour. I always told them they must wait for the firemen. I have not received more than two or three complaints from men who had had to wait. I have not had more than a dozen complaints.

Mr. Wynne.—Supposing that, as we saw, five or six places were being drilled at the same time, would those two firemen be the only two persons to fire shots at the top and bottom of a long level.

Witness.—Fletcher would assist them in going his rounds. The firemen would examine them, and let the men fire them one after another. I never heard the men grumble that there were not enough men to fire the shots. The shots were fired either with touch-paper, or by means of a thin wire made red hot in the lamp flame. I knew that this was done. To my knowledge the lamp tops were never taken off for that purpose. Sometimes straws and sometimes fuses were used. I have not found any of the men with pipes. The lamps were generally taken into the levels to be re-lighted. The last time I gauged the Seven-foot before the exlosion I found 24,000 cubic feet of air passing in every minute. At all times there are upwards of 40,000 feet of air per minute going out of the top of the pit.

By the Jury.—I cannot tell exactly what was the cause of the explosion. It seems to me that some one had the top of his lamp off, or struck a match. I cannot say what was the cause of the sulphur being there.

Mr. Wynne.—If the place had been ventilated the sulphur would not have been there?

Witness.—No; but we had been occasionally plagued by blowers of gas coming out of the coal suddenly. They will fill up a long way back, but we can get clear of them in a few hours or a day at most.

Mr. Wynne.—I thought you made a report on the Tuesday that the place was not foul?

Witness.—Only when a blower takes place.

Mr. Wynne.—You did not say so before?

Witness.—We have not had a blower lately.

Mr. Wynne.—Can you fix the time of the last?

Witness.—We had a very large one here (*pointing to the map*) a fortnight back, but we had wind enough to take it away.

By a Juror.—A pipe and a match were found in the pit after the explosion.

By Mr. Keary.—There is always a man in the lamp office to lock the lamps and to give them out, and there is a man at the bottom of the shaft who examines the lamps again before the men go into the workings. My orders were that no man was to pass whose lamp was not locked. It is the duty of the firemen to examine the workings morning and night before the men go to work. It was their duty to report to Fletcher if they found anything wrong, and Fletcher's to report to me. The place where I believe the explosion took place was where the pipe was found. The coal was most "frizzled" there. A sudden blower coming in contact with a light would explode, whatever the state of the ventilation. I never heard any complaints of the state of the ventilation.

Charles Lawton, deputy under-looker, deposed—I worked up to about four o'clock on the morning of the explosion, but I saw no indication of gas. John Henshall complained to me that there was gas about seven o'clock on Wednesday evening, and I told him and others to go to work in the new Seven-foot. The gas was reported to James Bossons, the fireman, who afterwards told me that he had put all right. In my opinion the works were safe when I left them that morning. Men were not in the habit of smoking in my presence. I have reason to believe they did smoke—a good many of them. I never saw men smoking in the workings.

By a Juror.—The men knew when I was coming, and then they put out their pipes. I have smelt tobacco. I never took any particular means to discover who had been smoking. It was not my business to do so.

Mr. Wynne.—Do you mean to tell the jury that you did not think smoking dangerous?

Witness.—I did not think it extremely dangerous to smoke.

Mr. Wynne.—Did you not consider it dangerous there should be smoking?

Witness.—In some parts of the pit I did.

To a Juror.—I may have smelt tobacco, but I cannot name any particular time.

By Mr. Wynne.—I knew that the men had keys of their own, and I had reason to believe that they unlocked their lamps. I did not find them unlocked. I occasionally tried the lamps, but I never found any unlocked—never. I did think it extraordinary in one sense and not in another, when I heard that some of the lamps had been found unlocked. The men could lock their lamps when they heard me coming. If I saw a man hurrying towards a lamp I might suspect that it was unlocked. I might have re-lighted some lamps that night. During the whole of the night I heard no complaint of the state of the pit beyond what I have mentioned.

By Mr. Keary.—I found a pipe against the top brow, but I do not remember any lamp being near it, but there were some matches. I and Nicholls found a lamp (No. 86.) with the top off. It was at the extreme end of the level. The lamp bottom was in the cut and the top against the rib. The top and bottom were six or seven yards apart. That was the place where Young and Lismore worked.

Mr. Wynne.—It will be found that this lamp belonged to Joseph Lismore.

By Mr. Keary.—I never saw any one smoke beyond the bottom of the shaft. I never received information that people had been smoking. I might have smelt tobacco. I have thought so. There have been occasions on which I might have smelt tobacco smoke, but I might have been deceived. I do not think I ever told anybody of my suspicions. I never saw a man with his lamp-top off in that pit. I have never heard of a man opening his lamp with a nail, nor sucking the flame through the gauze of his lamp.

John Henshall said—I was working in the pit the night before the accident at the far end of the lower level. When I went in there was plenty of good air in my place, and that continued until half past six in the evening, when being ready to fire a shot I sent for Bossons, the fireman, and by his orders I left off working there. A drop sheet had fallen down, and that led a little gas to accumulate. Bossons replaced the sheet, and restored the ventilation. I have never heard any complaints of want of ventilation nor of gas being in the pit. I never saw gas before this night, unless it might be a bit of a blower. I never carried a lamp key. I have made complaints of the firemen not coming to fire the shots, but I have never had to wait long. I have never threatened to fire shots myself if they did not come.

By the Jury.—I never saw a key in the possession of a collier. I never smoked in the pit myself. I chew in the pit and smoke at home. I never saw any one smoke in the pit.

Joseph Lovatt, collier, said—I worked in the pit up to two o'clock on Wednesday morning. I had no lamp key. If my lamp went out the fireman relighted it for me. I have seen men smoke in the pit, but I have never reported them. I have seen men open their lamps with false keys, but I never told any one.

Mr. Wynne.—None of the living men have false keys, Lovatt ?

Witness (innocently).—No, sir. (A laugh.) My mate generally fired our shots. Sometimes, if we wanted a shot fired, we fired it, whether the fireman was there or not. I have never heard complaints of delay made in consequence of the fireman not coming to fire the shots.

Mr. Wynne.—Why did you fire the shots yourselves ?

Witness.—We were like to fire them when we wanted coal for the loaders.

Mr. Wynne.—Whether the fireman came or not ?

Witness.—Yes.

Mr. Wynne.—Did you make inquiries for the fireman ?

Witness.—We have done, but not regularly.

The Foreman.—Was that against the rule of the colliery ?

Witness.—Yes.

Mr. Wynne.—How did you get a light ?

Witness.—I don't know. I always went away. My mate can tell all about that The fireman was not angry with us for firing our own shots.

John Steele deposed—I fired two shots in the night before the explosion. I lighted some touchpaper with my lamp. It was not my practice to send for the fireman when I had a lamp with gauze round the flame, but when I had a lamp with glass round the flame I was obliged to do so. I had not a false key. I never smoked in the workings, nor saw anybody else smoke there.

Joseph Bossons, fireman, said—The night before the explosion I examined the workings. There was a little gas where Henshall worked. The gas was about a foot down. It was caused by a sheet having fallen. I replaced the sheet, and so cleared the gas away. No one worked again in that place during that night. A few shots were fired. I did not know of men having false keys, nor have I ever known smoking in the pit. I left the pit all right between two and three o'clock in the morning. I cannot recollect smelling tobacco in the workings. I did not know that Proctor and Steele fired shots on Tuesday night. I have often tried the lamps in the workings, and have never found one unlocked. The men have complained of having to wait for some one to fire their shots.

Daniel Heath, collier, said—My place was clear of gas during the whole of Wednesday night. Bossons tried my lamp and those of the men I was working with. I fired four shots on Wednesday night. The fireman was not there, but he knew that we fired them, because we could not have got coal if we had not done so. We lighted touchpaper with the flame of the lamp. I never saw any one smoke in the pit. I never knew a lamp to be unlocked excepting by the fireman.

James Anderson, collier, was then examined. He said—I had been working all Wednesday night in the lower level, and found no gas; nor did I hear any complaints of gas. At half past 5 o'clock in the morning, while I was talking to Fletcher, Kenyon came up and said he had been through the workings and found them safe. I never saw any one smoking in this part of the pit. Some of the men had lamp keys. I never had a false key, or smoked in the pit.

Thomas Turnock deposed—I went to work at five o'clock on the morning of the explosion, in the middle level. Kenyon tried my lamp and also my working place. It was free from gas. I worked until the explosion, the effect of which was very slight upon me. I concur in an opinion expressed by Mr. Wynne in the pit, that the explosion took place in the lower levels.

By Mr. Wynne.—The level I was in was bratticed, and there was very good ventilation. About a month before the explosion we had a little gas one morning, but we mentioned it to the overlooker, and he sent the fireman to remove it. On one occasion I had to leave the pit because there was a large blower which filled up the place almost as fast as I could run out. That was about 12 months since. There has been no gas lately that was worth speaking of. It may have come down about a foot, but we have blown it away with a piece of tin. The blower was on the third level above the stable dip. It caused us to cease work in that level a week or more. The fireman always fired my shots. I have seen men smoking in the pit.

Peter Hollier, banksman, said—Kenyon went down the pit about an hour before the rest of the men on the morning of the explosion. None of the men who came up before that time complained of the gas.

William Salmon, another banksman, was also called, but all he said was that the explosion blew him against the head gear, and he was so frightened that he ran home, and did not come near the pit again that week.

John Breeze, collier, said—There was a blower where I was working on the Wednesday night, but the air took the gas away as fast as it came. I fired one shot that night, getting the light from the fireman. It was after the blower had done blowing. The blower lasted about a quarter of an hour. I heard no complaints made that night of gas being in any part of the pit. I was one of the first who went down the pit after the accident. I found Samuel Harrison dead, with a pipe in his hand. I found an unlocked lamp near him. (*The pipe was produced, and found to have been half smoked out.*) I never saw any one smoke in the pit, but I have smelt smoke. I did not know that the men had false keys. I had not one myself.

By the Jury.—Harrison's lamp was not open. I never heard of anybody unfastening a lamp with a pick.

The Deputy Coroner.—Is there any one here who worked in the upper levels?

Mr. Johnson.—No; they were all killed.

James Withenshaw, collier, said—I went to work at half past five on the morning of the explosion. Fletcher and Hicks told me the pit was safe. I never heard any one complain of gas being in the pit. There will often be blowers in a new piece of Banbury. I fired my last shot myself, because Fletcher told me I might. It was only three or four minutes after he had left. I have never had to complain of delay on account of the firemen not coming to fire the shots. There was only one explosion.

Charles Roberts deposed—On the morning of the explosion I was working in the far end of the top level, in the same place as Withenshaw. I examined my place when I got to it, and found it was free from gas. I heard no complaints on Thursday about there being gas in the pit. I had to go a long way, but I saw no gas. After the explosion I put up a sheet to get some air, but none came. After waiting about twenty minutes we made our way to the bottom of the shaft. We trod upon some bodies, but although we had lights we could not see them on account of the smoke. We expected every minute would be our last, for we were losing the use of our legs and arms. I have sometimes met with blowers, but the last was a good while before the explosion. I never had a false key, nor did I smoke in the mine. I have never seen men smoke in the mine.

Daniel Cope, collier, was called to prove that on the Wednesday night there was no gas in the upper level.

By Mr. Wynne.—James Bossons fired some shots that night for David Heath. I fetched him at Heath's request.

Alfred Dale, who was still suffering from the effects of the accident, and was therefore accommodated with a seat, said—I worked at the bottom of the stable dip. There was no gas there, nor did I hear any complaints of gas. After the explosion the flame rushed past me. I made my way to the up-cast shaft, and called out for a rope, but they told me to go down to the Banbury, and I did so.

Moses Taylor, collier, deposed—I was working in the Seven-foot on the morning of the explosion. It had been tested by Kenyon, who said it was all right. I tried my place when I got there, and found it free from gas. About an hour and a half before the explosion we had a blower, and I sent for the fireman, who put up a length of bratticing to clear it off. It succeeded, but there was a little gas left when the explosion happened. We very seldom made blowers.

By Mr. Wynne.—The gas fired in our lamps. I was taken out of the pit insensible.

Richard Elliot proved there was no gas in the new Seven-foot on the morning of the explosion, and that there was a good supply of air. He was taken out of the pit in an unconscious state.

Henry Randles said—I worked in the extreme north end at the pit. Hicks tried my lamp. He also examined my place, and said it was right. I have not met with a blower during the two years I have worked in the pit. The fireman fired my shots and re-lighted my lamp at the bottom of the shaft.

A Juryman.—Do you mean to say that if your lamp went out you took it to the bottom of the shaft to have it re-lighted, a distance of half a mile?

Witness.—Yes.

The Juryman.—Then you are a good chap.

James Oldfield, lamp cleaner, deposed—I had charge of the lamps, and gave out all those used by the men. They were always properly locked. Lismore's lamp was No. 86. The lamps were given to me after the explosion. Most of them were locked. I cannot say how many were unlocked. There were some. William Booth's lamp was

No. 325. I never had any lamps given to me unlocked after an ordinary day's work. I never knew that the colliers had false keys.

Mr. Wynne.—Do you mean to say you could not tell when the lamps had been tampered with by such rude keys as these?

Witness.—Yes.

Police-constable Beckett said—I found the 27 lamp keys, already produced, in the pockets of some of the dead men. I also found more than a dozen plain and fancy pipes, many more tobacco boxes, and matches in the pockets of most of the men. On the elder Booth I found a lamp key.

Daniel Brownsword, a collier, was called. He said he went to work at about five o'clock on the morning of the explosion. Samuel Kenyon tried his lamp at the bottom of the shaft. Hicks was the fireman that turn. He was going his round, and had not returned. He (witness) went into his place, and found a small quantity of gas before he thirled, but not enough to be dangerous. It went away when he had thirled through. At half past ten he left the pit because he had to go on a journey. There was no gas there then. There was more or less of gas in the pit, but he never saw enough to make it dangerous. He never had to leave his working place on account of gas. He remembered a man named Draycott trying to fire a shot himself, and he was stopped by the underlooker. He had worked in the pit four or five months, and never yet saw it in a dangerous state. He had sometimes met with small blowers, but had brushed them out in a few minutes. He fired his own shots, whether the fireman was there or not. It was the rule in the pit. It was the practice to fire with touch-paper lighted at the lamp. He never saw a man smoke or unlock his own lamp in the pit. When his lamp went out he had to take it to the fireman. The gas sometimes fired in the lamps. If there was not much gas the men did not complain to the fireman. The fireman always took the lamps into the fresh air to re-light them. There were places which gave off a good deal of gas, but as an old collier he had never had any difficulty in clearing it away.

Francis Seabridge, collier, went to work at six on the morning of the explosion. Kenyon tried his lamp. He worked in the main landing of the Seven-foot. About eleven o'clock he saw like a big ball of red-hot iron coming up the jig. He threw himself down, and it passed over him, and he was burnt. He was obliged to remain until some one came to put him in the cage. The waggons went off the rails, at the door, for about twenty minutes before the explosion took place. They often went off the rails, but not at the same place. Thirteen or fourteen trains of six tubs each went through the door every hour. The journey lasted about a minute. There was a boy whose duty it was to do nothing besides open and shut the door in the jig.

Thomas Froggatt, collier, saw no gas in the pit the night before the explosion. He had never had occasion to stop working on account of the gas, nor had he heard complaints of gas. He had fired shots when the fireman had not been there.

Joseph Johnson, collier, saw no gas in the pit previous to the explosion. He had worked in the bottom levels, but had never seen any gas there. He had once left off work on account of gas. When he found a little gas in his place the fireman used to allow him to brush it out. He had fired shots without calling in the fireman.

John Condliff, one of the men who came out of the pit alive, badly burnt, was unable to attend the inquest. The foreman of the jury and the Deputy Coroner attended at the man's house to take his deposition. He said: On the morning of the explosion I was working at the top of the main dip. I went down at half past five o'clock, and worked until the explosion took place. Shortly after eleven o'clock I felt a wind, and then the fire came. We had a train of waggons off the line in the jig in the doorplace. The door could not be shut, and then the air commenced to go wrong. There were a lot of men, amongst whom were Edward Dutton, Samuel Kenyon, and Edward Duffy, who were trying to clear the line. The train was off about ten minutes. We went down to the train, and they sent me to fasten the jig, and then I sat down with Seabridge. The pit was all right when I went to work in the morning, and I heard no complaints of gas. I have seen men smoking in the pit; and I have seen both men and boys with keys to unlock their lamps. Most of them used to unlock their lamps to snuff the wicks; but they always kept a look-out when they were doing so. I never knew the place unfit to work in. I have worked there about five months. I sent the empty powder cans out of the pit at ten o'clock that morning. There was very little powder in the pit at the time of the explosion. The fire came up the dip.

Mr. Coe, manager of the Biddulph Valley Collieries, the property of Mr. Robert Heath, examined by Mr. Keary, said—I have been connected with collieries nearly forty years, and have been a manager 27 or 28 years. I visited the pit in question the morning after the explosion, accompanied by Mr. Wynne and others, and examined a considerable part of the workings. In the lower level we found the coal on fire for a distance of six or nine feet. We put a piece of wet cloth over it, and I and Mr. Wynne stood on it while some of the men brought water to put it out. In the up-brow there were strong marks of an explosion. The dirt was charred, and everything seemed to be calcined. If the explosion took place there, as I believe it did, it divided itself into two, and proceeded in two directions. About seven or eight yards from where I suppose the explosion originated, we found a pipe and matches. From what I subsequently heard, my impression has been strengthened that that was where the explosion occurred. On the Monday morning after the explosion, I, Mr. Wynne, Mr. Johnson, Mr. Nicholls, and others went down again, and examined the whole of the workings, and we found a little gas in the rise where the ventilation could not get to it. With that and another slight exception we could not find any gas in the pit. There is no doubt that the coal let off a good deal of gas. I tested the ventilation on the 31st, and found the pit perfectly clear, and the ventilation completely restored. 33,000 cubic feet of air per minute was going into the mine. At the place where I believe the explosion occurred I found 1,207 feet entering per minute, which was quite sufficient to ventilate the up-brow. I have no doubt it was better to drive the up-brow than clear out the back brow where it was injured by water. I think Nicholls acted wisely in driving that brow rather than clear out the other. There is always risk in driving up-hill in a fiery mine, but at the same time I think Nicholls took sufficient precaution in requiring the men to use safety lamps. If the men had kept the tops on their lamps, had not smoked, nor struck matches, I think that the pit would have been perfectly safe. No shot was fired in the up-brow immediately before the explosion, because a man's pick was lying there just as he had used it. I agree with Nicholls that it was better to connect the pit with the new Seven-foot than sink to the Eight-foot. Taking everything into consideration, I think the works were well and skilfully laid out, and no fault can be found with them, nor with the manner in which the pit was conducted. I think proper precautions were taken to prevent accidents, and that a great deal of credit is due to Mr. Johnson and to Nicholls. (The jury expressed their approval of this sentiment by stamping on the floor.) I have seen the lamps. They are of two kinds. The common Davy with gauze round the light, and the Clanny, which has a cylinder of glass round the light. I do not approve of the Clanny lamp being used in dangerous places, and I was very glad to see on going into the pit with Nicholls after the explosion that he would not allow the men to go into dangerous places with the Clanny lamp. The reason is that the glass is liable to be broken. I examined the lamps generally, and I never saw a better set in my life. I never saw a lamp yet which could not be unlocked, and it is no matter what kind of lamp you invent as long as the men strike matches in the pit. If that practice could be stopped there would be some gain in having a lamp which could not be opened. If a man wants to light his pipe or fire a shot, he will strike a match if he has one, and in all probability he would do that if the pit were as full of gas as it would hold. The blowers spoken of proceed mostly from what are called jumps or small dislocations of the strata.

By Mr. Evans.—As a principle it was not a good thing to have to bring the air down a distance of 200 yards to the outlet. I do not think there is anything to show a want of skill in taking the air from the rise workings to the deep levels. I did not measure the quantity of air at the rise workings. The quantity of air at the return was 25,000 cubic feet per minute. I believe the whole of that quantity went up the rise workings. It was a very wrong and foolish thing for the firemen to allow the men to go into their places when there was gas there and to brush it out themselves. As a principle that was wrong, and was not skilful management. I would not let men go to work where there was gas. It was not right for the firemen to relight the lamps in the return air. If I had a lamp to light in the return air I should first of all ascertain whether it was dangerous or not, but no doubt it is wrong in principle to relight them there at all.

Mr. Evans.—Do you think that powder ought to be used indiscriminately in a fiery mine where gas is constantly being given off?

Witness.—That question involves a great deal. It is a matter of pounds, shillings, and pence. I take it the object of this inquiry is to find out the cause of the death of these men, and I believe it is admitted that the firing of a shot was not the cause of the explosion. Putting that on one side, I hold the opinion that in all fiery pits, giving off gas in considerable quantities, the use of gunpowder ought to be prohibited entirely and for ever. ("Hear, hear," by the jury.)

Mr. Evans.—I am much obliged to you for the answer, but it is only just to say that the practice is very general.

Mr. Coe.—It is the rule. I have fiery pits under my charge, and I use gunpowder simply because I am compelled to do so by the usages of the country.

The Deputy Coroner.—Do you mean that you could not compete with other coal getters if you did not use it?

Mr. Coe.—I mean that if I said we must not use powder the colliery proprietors in this and other counties would put me down for a complete noodle. They would not think me *compos mentis.* On the other hand, the men, if I were to make such a proposition, would look upon me as their greatest enemy. The night before the explosion I know there was gas in the lower levels. I know there was gas frequently there. I think that 25,000 feet was quite enough to ventilate those low levels. There was not enough to clear that part the night before the explosion, because the man Henshall had to leave. That might have arisen from two or three causes. The brattice might have been disarranged, or an extra quantity of gas might have been given off from the face of the working, or some of the doors might have been partially open through neglect, which would be the main cause. I am not aware that gas was constantly being given off in the low levels. Where you are obliged to put doors it is better to have them double. That ought to be the case where the ventilation depends much upon doors. In the part of the country where I gained much of my experience it is only great rushes of gas which will immediately fill a pit that are called blowers. Here they call every little jet a blower. The ordinary ventilation ought to have been sufficient to keep the place clear of small blowers.

Mr. Evans.—But we have evidence that it did not.

Mr. Nicholls was recalled, and examined by Mr. Keary.—He said, I believe it was a quicker operation to drive the up-brow than to clear out the back dip, and that was my reason for taking that course. The reason why I had only one door in the jig was that the distance between the two cross-headings, 25 yards, was so small that on the passing of the waggons they would virtually have been both open at the same time. In no respect was I ever deterred from fear of expense. Expense never was a consideration with the proprietors. In all I did I acted to the best of my judgment and ability. After we got the cross-head in I never heard of a complaint of want of ventilation in the lower levels. In the case of the man Draycott, it was reported to Lawton, the underlooker, that he wanted to fire a shot himself. Lawton went to his place, blew his lamp out, and ordered him out of the pit. When he came to the top I sent him about his business. In another part of the colliery men for removing the tops of their lamps have been taken before the magistrates and fined. That was under different management. It has never come to my knowledge that the offence was committed in this pit. It was entirely contrary to the rules and to my orders.

By Mr. Wynne.—The door in the jig was put in to enable us to get the new air-brow completed. I heard that gas was in the extreme low level. It was caused by one of the sheets being down. I account for the gas being there, notwithstanding the door being on the jig, by an imperfection in the sheet. Another sheet was put up after that was down, but when the door was up there would be no sheet wanted. The ventilation was not materially interfered with by the opening of the door on the main jig.

Mr. Wynne.—Was it not the fact that these new levels were opened without sufficient ventilation, in order that you might get all the coal you could?

Witness.—No; I did it to provide a place to put some roof rubbish in. There were 1,200 feet of air coming into the lower levels every minute. I cannot say whether on the 27th of December there were only 200 feet passing into the lower levels after the ventilation had been restored.

Mr. Coe, on being recalled, said, in reply to Mr. Keary—The up-brow would be driven in less than half the time it would take to clear out the back-brow. In his opinion the mode of ventilation was the best and only mode under the circumstances. He should not have hesitated a moment to work the mine with the ventilation provided.

Mr. James Dickson (a juryman).—Mr. Coe, the jury would like you to explain what you mean by "under the circumstances"?

Mr. Coe.—The back-brow being swollen up, it was necessary to bring the air down the jig-brow. Under those circumstances, I say, it was better to bring it down there than down the jig-brow.

Mr. Wynne.—What was the necessity for carrying on these lower levels at all until a proper supply of air had been provided?

Mr. Coe.—That is a question rather for the managers than for me. All I say is I should have had no hesitation in carrying on the mine with the ventilation I found there after the explosion.

Mr. Wynne.—And kill 91 men. Then you would go very near the wind indeed. If those levels had not been driven, would the explosion have happened?

Mr. Coe.—I do not know.

Mr. Wynne.—What caused the explosion?

Mr. Coe.—I believe those lower levels had nothing to do with the explosion.

Mr. Wynne.—Does not the evidence go to show there was gas in the lower levels?

Mr. Coe.—No question.

Mr. Wynne.—And none in the up-brow?

Mr. Coe.—And none in the up-brow.

Mr. Wynne.—And yet the lower levels had nothing to do with the explosion?

Mr. Coe.—I believe the explosion took place in the up-brow.

Mr. Wynne.—Do you mean to tell us these levels had nothing to do with the explosion?

Mr. Coe.—Nothing whatever.

Mr. Wynne.—Very well. Now, did you ever in your life see a pit in which a single door in the jig guarded the whole ventilation?

Mr. Coe.—I never did.

Mr. Wynne.—And do you call that good management?

Mr. Coe.—I never said anything of the kind.

Mr. Wynne.—You are going a little further than you did yesterday?

Mr. Coe.—I said the same last night. I did not defend the use of only one door.

Mr. Wynne.—You said the workings were skilfully carried out?

Mr. Coe.—I said, "under the circumstances."

Mr. Wynne.—Then, I say, under the circumstances, was it right to push on those levels?

Mr. Coe.—If I had had the management I should have pushed them on with the amount of ventilation provided, but I should have had a double door. There is no evidence there was gas in the lower levels at the time of the explosion.

Mr. Gavin Addie said he was a coal and iron master in the immediate neighbourhood, and he had been sixteen or eighteen years engaged in mining operations, and a considerable portion of the time in that district. He went down the pit soon after the explosion, and he described the state of the pit. The explosion, he believed, took place in the extreme end of the up-brow. He visited the pit on the 31st of December, and the ventilation was then very strong and quite sufficient. It was not an unusual extent of working to ventilate with one current of air. It was certainly a better and more skilful course to drive the up-brow than clear out the back dip. The back dip, had it been cleared, would have been unsatisfactory and unsafe. He considered there was ample ventilation for the lower levels.

Mr. Keary.—Have you formed an opinion as to the cause of the explosion?

Mr. Addie.—Well, these deep workings seem to have been giving off gas very heavily as they were proceeding, and if the ventilation was interfered with for any considerable length of time most certainly it would accumulate in the different working places, and the carelessness of the men, of which we have had so much evidence, would be sufficient to account for the explosion. A dangerous quantity of gas would accumulate if the door on the jig were left open from ten to twenty minutes. According to what we have heard, Kenyon, the fireman, and other men, crowded round the waggons when they got off the rails, and that would most likely occupy some minutes; but Kenyon should first of all have taken the men out of the deep levels.

By Mr. Wynne.—It was dangerous to have the door open beyond ten minutes. It is certainly objectionable to have an important door like that on the main jig brow. I have heard that most of the faces gave off a little gas. There was no absolute necessity for driving in those lower levels, but I consider it was perfectly safe to do so, provided the door in the jig was not kept open from ten to fifteen minutes. It is not possible to secure that a door of that description shall always be kept shut, but it may be kept shut sufficient for the purpose of ventilation. The train was as likely to go off the rails in the doorway as at any other point in the jig. If a train went off there, and the door were kept open ten minutes, there would be a dangerous accumulation of gas.

Mr. Wynne.—Then I have nothing more to ask you.

Mr. John Strick, one of the first explorers of the pit after the accident, said he had been for three and a half years mining engineer at Earl Granville's colliery at Hanley. He gave an interesting account of several explorations which he made in company with Mr. Wynne, Mr. Addie, Mr. Coe, and others, and said in his opinion the explosion took place in the up-brow. He believed there had been a good current of air in the pit, and that everything had been in good working order.

Mr. Rigby, the next witness, said he had been a coal proprietor and manager 30 years. He owned pits in the neighbourhood. He was in London at the time of the accident, and did not visit the pit until a fortnight afterwards. He inferred from the appearances that the explosion took place in the up-brow. On the 27th of December he found the ventilation very good. On the 31st he visited the pit again, when everything had been put right, and found the ventilation excellent. He therefore believed the ventilation was good before the accident, and sufficient to keep the workings clear of gas. The passing of the trains through the door on the main jig was not sufficient to make the ventilation bad. He thought the fireman ought to have called the men out of the lower levels. He had had great experience in the Seven-foot Banbury, and had found blowers very frequent. It was quite possible that a blower might have occurred in the up-brow, which would overcome the ventilation of 1,200 feet per minute. He remembered the case of a blower which took fire before it had become explosive, and it burned with a constant blaze four yards square. It could not be extinguished until the pit had been closed. Such a blower as that, supposing a naked light, might cause an explosion, notwithstanding the ventilation described. He considered the managers had taken every possible precaution, and that if the rules had been observed no explosion would have taken place, although there might have been an accumulation of gas.

By Mr. Wynne.—It was possible for a blower of the kind he had mentioned to proceed from a rib a yard thick. He had never seen in a fiery mine the ventilation left to a single door on the main jig.

Mr. Wynne.—Do you call that prudent management?

Mr. Rigby.—My opinion is that, taking into consideration the care displayed in other things, this was quite an oversight.

Mr. Wynne.—Was there any necessity to push the levels forward until the ventilation had been proved.

Mr. Rigby.—There was no necessity, any further than this, that they always like to push on the deep heading.

Mr. Wynne.—And to get coal?

Mr. Rigby.—Not only that, but to prevent the making of other openings. With regard to the door on the main jig, each case must be decided by itself, according to circumstances.

Mr. Wynne.—We have heard that nearly all the places were giving off gas all the way round.

Mr. Rigby.—Yes; it is very likely.

Mr. Wynne.—Then the air sent into the lower workings would be the worst air that could possibly be in the pit?

Mr. Rigby.—Yes.

Mr. Wynne.—Then was there any necessity to push those levels when they must depend upon the jig door and the worst air in the pit?

Mr. Rigby.—In such cases every man must judge for himself. It must be his duty to ascertain whether the air was charged with gas.

Mr. Wynne.—Was it not bound to be charged with gas after passing 18 or 20 faces of workings?

Mr. Rigby.—It might have been quite clear, for this is a coal which does not give off a great quantity of gas, as a rule. The gas comes from joints in the rock. It would be the duty of the fireman to examine the air at different times during the day, that he might know whether it was laden with gas.

Mr. Wynne.—I was asking whether the whole of the gas from the faces did not get into the air sent into the lower levels, and whether the ventilation was not cut off every time that door was opened in the jig.

Mr. Rigby.—Yes.

By Mr. Keary.—I agree with the other witnesses that when the water had been got out of the back dip it was better to drive the up brow than to clear the back dip.

By Mr. Evans.—It was not the duty of the fireman always to be watching the door in the dip in order to bring the men from the lower workings in case of waggons getting off the rails. He might be up in the rise workings, and then it would take more than ten minutes to fetch him back.

Nicholls, recalled, said—There is a deputy to every section of the pit.

By Mr. Evans.—He had never given the firemen orders that when the door was open ten minutes he was to bring the men out of the lower level.

By Mr. Keary.—It was one of the rules that, whenever a collier found gas, he was to give immediate notice to the fireman.

Mr. Rigby, recalled, said, in reply to Mr. Evans—If the return air was not gas laden, a fireman might safely light a lamp in it. It was his duty to ascertain that it was not laden with gas. As a rule it was objectionable to light lamps in the return air. He did not see the colliery before the explosion. When he went down everything had been put into apple-pie order. He thought the explosion was caused by an unlawful exposure of a naked light by a collier.

Mr. Wynne was next examined. He commenced by reading the following report on the case:—Having heard of the explosion about one o'clock in the day, I at once proceeded to Talke, and found everything in confusion. Mr. Johnson, Mr. Addie, and Nicholls were on the bank, having been down for a short time exploring. On Nicholls privately informing me that the stables were on fire, I at once saw that it must be extinguished, or the explorers withdrawn. At my particular request, Mr. Johnson remained at the pit top to receive orders from below, and see that they were executed, and right well he did that. We then descended, and carried the fresh air with us by stopping up with bratticing the opening between the air-brow and the main jig. When we reached the opening below, the third stable on the main jig brow, we crept on our hands and knees to ascertain the state of the fire, not daring to turn the air on to it, lest a flame should be created, and all in the pit killed by a second explosion. After consultation, we determined to cover over the mass of fire with several thicknesses of brattice sheet, and each of us to go in turn in the dark, and trample the fire out, or at least keep it down until buckets could be obtained from the surface and water from the bottom of the pit. Fortunately, success rewarded our efforts. We then carried the air forward some distance, when Mr. Addie and I went down to the bottom of the shaft to see what effect the turning of the gas out of the higher workings would have upon the explorers in the lower part of the pit. After sending up five men alive out of the eastern section of the 7-feet mine, and pushing forward to nearly the far end of the lower level, we came to the conclusion that as all the men and horses we found were dead, the place so hot as not to be endurable, and the other exploring party were turning the gas upon us, it was only prudent to withdraw these men, and prosecute the search with more diligence in the higher workings. That was ably done during the night. The next morning I again commenced my search, and after traversing nearly all the workings, and finding several dead bodies, we came upon a mass of fire in one of the lower levels, and within a few feet of a very large accumulation of carburetted hydrogen, or fire damp. Here too we were fortunate enough to extinguish the fire without an explosion, as water was near at hand, and all worked with a will. On Monday, December 17th, with the assistance of my able colleague, Mr. Evans, I commenced my inspection, and found that the downcast shaft was of about 95 feet area, down to within about 15 feet of the main levels of the 7-feet seam, from whence is an incline down to a scaffold, over the tunnel that is driven from the upcast shaft to the downcast. In this scaffold is an opening of about 30 feet area, through which the air comes into the tunnel, and thence it is turned by double doors into the main up-brow intake, which conducts the air to the highest part of the workings; it is then conducted by doors and brattice cloths into the numerous new cuttings that are being worked forward, and thence down to the main level at the far end; it then returns some distance towards the upcast, but doors are placed in this level to turn it down to the lower one, where it is carried by brattice cloths to the far end, and thence, through the tunnel, to the bottom of the upcast shaft which is down to the 8-feet mine. The downcast and upcast are used to ventilate two other mines. At the 10-feet, 168 yards from the surface, there is an opening of 42 feet area; at the two-row, 200 yards deep, one of 72 feet; and at the 7-feet Banbury, 310 yards, one of 30 feet. The upcast has an area of 95 feet, with somewhat similar openings at depths rather less than the downcast, owing to the dip of the mine, but this shaft is down to the 8-feet Banbury, at 350 yards, where there is only a small amount of work done. In the two upper seams there is a considerable amount of work going on, and they are ventilated by means of these shafts; but a furnace is placed in each, to increase the volume of air passing, so as to enable them to split the current into such quantities as the necessities of each mine may require. The explosion took place at or near the far end of the lower pair of levels, where the clearest traces of the fire are now to be seen, and extended along these levels, dividing at the junction of the tunnel and the jig, driving everything before it. When the fire reached the top of the brow it smashed the doors between the two pits, and the one at the mouthing; but this offered sufficient resistance to turn aside the blast, and send it up the main jig towards the upper workings, when the flame must have been very great, for it set fire to the stables. Beyond the top of the jig there are no traces of fire, but the blast may be traced far beyond this point, though, owing to the openings being so large, the resistance was much less; consequently, the blast was scarcely felt in the back workings, one man coming out to see what was the matter. And I may here remark that if the poor fellows had made for these workings instead of the main jig many lives would have been saved. The force of the blast must have been very great all along the tunnel, and in the seven-feet workings beyond the fault, where all the doors were broken, and all the stoppings blown away, whilst the sump at the bottom of the pit was filled with broken tubs and timber, so that the cage could not reach the landing-place, which made the work of rescue still more tedious. There can be but little doubt in the minds of those persons who examined the mine after the explosion that it occurred in one of the lower parallel levels, and was caused by the smoking of tobacco, the opening of a lamp, or the firing of a shot; but, in my opinion, the real blame does not rest on the men who did either of these things, so much as on those who had the care and control of the mine. When the shaft was sunk to the Eight-feet Banbury, the downcast should have been sunk also to the seven-feet, to give a free current of air to the eight-feet, the new workings in the seven-feet beyond the fault, and all below the main seven-feet level, leaving all above to be ventilated as at present, and not attempt to force air after it has been a vertical height in the workings and 220 feet down from its natural outlet to workings 120 feet still deeper. About twelve months ago the water rose in the lower inclines, and caused the floor or thill to swell or rise. When the water was got out the main jig was cleansed for the purpose of sending coals down to the tunnel; but unfortunately the airway (a back dip) was not cleansed, and consequently the lower levels would be always in a dangerous state, and ought not to have been pushed forward. It appears the danger was foreseen, and a new dip driven downwards as far as the water would allow, then another was commenced to be driven upwards, and would have been thirled in a few days. In many places the main airways are contracted to an area of 16 feet, which is at all times objectionable, but the more so when chances of leakage are so great, and the length of the current so unreasonably large, as by that means the air becomes so attenuated, and so loaded with noxious gases, that it becomes useless as a ventilating medium in the later places it enters. The discipline in the pit must have been most lax, or smoking could not have been carried on to the extent it was, without something being done to put a stop to it, nor could the possession of surreptitious lamp keys by the men have been the rule, and not the exception, as is now proved to have been the case, without those in authority winking at it; nor could shots have been fired in a well-regulated colliery in the loose way they appear to have been fired here. I am told that a small split of air was passed through the stopping or door in the main level to go down the jig, with a door at the bottom to turn it along the upper of the two levels. Now, this was useless for the purpose intended, or perhaps worse than useless, as it took off the pressure from the almost closed airway, and every time the tubs went through the door on the jig the whole of the current was liable to pass away to the upcast shaft. With such a mode of ventilation it was highly improper to open so many new places at the same time, releasing gas at every stroke, with totally inadequate means to carry it away, and more particularly the lower levels, which must have been at all times highly dangerous. I, therefore, am of opinion that the explosion was caused by the want of power to ventilate the lower workings; that this work should not have been pushed forward until the pit was sunk, and above all not until there was some means of ventilating it, which does not appear to have been the case; but I may here add, that had it not been for the great barometrical fluctuations during the few days preceding the explosion, the barometer on Tuesday morning showing a pressure equal to a column of mercury of about 30·34 inches, and on Thursday one of about 29·34 inches, it is possible that the danger might have been tided over until the new airbrow was completed. I think it but just to state that every facility has been afforded me to arrive at the truth, and I do not believe that Mr. Johnson has withheld any fact that was material to the elucidation of this melancholy affair. As regards those brave men who assisted in exploring the mine, no words of mine can express the admiration I feel for their heroism; for I witnessed men with a full knowledge of their own danger go groping in the dark over dead men, in the strong hope of rescuing a living one. And, what was most admirable of all, a sense of their own danger did not cause them to disobey a single order given.

The Deputy Coroner.—Taking the words of the first special rule, do you think there was an adequate amount of ventilation constantly produced in the mine so as to dilute and render harmless noxious gases to such an extent that the working places and travelling roads were under all circumstances in a fit state for working in and passing along?

Mr. Wynne.—My belief is there would be a sufficient amount of ventilation; but the misapplication of it caused the explosion.

The Foreman.—That only amounts to an error of judgment. We have had several witnesses who said that it was properly applied.

Mr. Wynne.—That is not my opinion.

Mr. Dickson.—Will you please to explain yourself rather more fully?

Mr. Wynne.—No man who conducts a colliery at all with a view to the safety of his men would ever allow any part of it to be dependent for air upon a single door on a jig.

By Mr. Keary.—I have every reason to think the quantity of air was sufficient. The application was defective, because it depended upon the door in the jig. There is no occasion to point out any other way in which it was defective. That is fatal to the theory of good management. Nothing ought to have been done until the back brow had been cleared out. I do not agree with the other witnesses, that the explosion took place in the up brow; but that is not material. I think it occurred in the lower works; but I do not press the point. Any gas sent along would ascend into the up brow. When I saw it there was scarcely a breath of air going in. The opening and shutting of the door in the jig 13 or 14 times an hour would be at all times dangerous. I think it utterly impossible that the journey could be performed in a minute without sending every other train off the rails. The speed would be 15 miles an hour. It may be there is no evidence of complaint of gas in the lower works, excepting the night before the accident, though we have heard that the men reported one of the colliers who attempted to fire a shot. My opinion is, although it may not agree with the evidence, that those places were always short of air; they were bound to be. If there was any ventilation at all, all the gas blown out had to go into the lower levels. There should have been a double sheet instead of a single door in the jig, that one might have fallen as the other was raised.

Mr. Keary.—Then the *gravamen* of your complaint is that there ought to have been two sheets instead of the door.

Mr. Wynne.—No; the lower levels ought not to have been worked at all until the other shaft had been taken down and the back brow cleansed out.

Mr. Keary.—If you had the management of the mine, and after putting up the door you had found the ventilation sufficient, would you have carried on those levels?

Mr. Wynne.—No; it could not have been done safely.

Mr. Keary.—Mr. Coe, Nicholls, and several other witnesses say differently; so that it was only an error in judgment.

Mr. Wynne (emphatically).—It was a very serious one; any captain who steers so near to the wind that the slightest hitch in his tackle strands him does not act the part of a wise captain.

Mr. Keary.—Mr. Coe is a man of great experience; do you think he has given an opinion which he does not believe might be properly acted upon?

Mr. Wynne.—I do not think he has. I do not suppose the mistake was a wilful one, but it was a very serious error in judgment.

Mr. Thomas Evans, Inspector of Mines for the Midland Counties, said—I visited the colliery on the 17th of December, four days after the explosion. I believe the gas accumulated in the lower workings, whether in the level or rising I do not know, and that it was fired by the introduction of a naked light. I believe the cause of the accumulation was the absence of a proper amount of air in the far end workings. There was a sufficient quantity of air in the rise workings to carry away the gas given off. It may have been that the door in the jig was left open, or that the ventilation was so nicely balanced that there was not air enough to meet the changing condition of the atmosphere. I think taking one current of air down the shaft and all round the workings and back to the deep heading was not skilful management, and ought not to have been done. It appears that a great deal of gas was given off in most places, and that most of it was taken down to the bottom workings. I never before met with a mine where discipline was so lax as this—where shots were fired by anybody at any time—where men were permitted by the firemen to go into places where they knew gas had accumulated, and where lamps were lighted in the return air after it had been all round the colliery. In my opinion the explosion was as much due to lax discipline as to anything else.

By Mr. Keary.—A report ought to have been made to Nicholls every day of places where gas had been found, and he ought to have entered them in a book. Proper lamp stations ought to have been fixed upon, and the men ought to have been told they must go there to have their lamps relighted.

Mr. Keary.—There is no evidence that the manager knew of these irregularities.

Mr. Evans.—Let the jury draw their own conclusions. I have my own opinion.

Mr. Keary.—Can you point to any evidence that the manager knew.

Mr. Evans.—I cannot. I have conferred with Mr. Johnson privately, and I believe he did not know. Perhaps Nicholls did not know, but he ought to have known.

Mr. Keary.—You have heard his distinct and positive statement.

Mr. Evans.—I do not remember; but if he says he did not know, I believe him.

Mr. Keary.—The breaches of discipline you complain of are the firing of shots by the men, the use of naked lights, and smoking.

Mr. Evans.—Those are all I have heard of, but after the evidence we have had of wilful violation of the rules I take it for granted others were treated in the same style.

Mr. Keary.—That is rather an assumption.

Mr. Evans.—Had the colliery been well regulated the manager would have known what was going on.

Mr. Keary.—Is it unusual to ventilate a mine this size with one current of air?

Mr. Evans.—One current might have been enough if it had been taken properly down the low side and then to its natural exit at the top. I do not believe that one fifth of 25,000 feet went through the colliery. I have known a colliery four times this area ventilated by one current of air, and 114 people were killed. I wish to add that so long as men use powder so long shall we have explosions. I have very strong feeling on the subject. It is a most dangerous practice.

Mr. Wynne.—I entirely agree with Mr. Evans on that point.

Mr. Coe recalled, said—I was not manager of the Lund Hill Colliery when the explosion took place by which 189 lives were lost, but I was connected with the management. I did not leave immediately after the explosion; it was about three months afterwards.

By the Deputy Coroner.—I had been manager from October to January. At the commencement of the new year Mr. Holt, of Wakefield, was appointed manager. The explosion took place on the 19th of February. I was there about four months.

By Mr. Keary.—Mr. Woodhouse, mining engineer, heard me give my evidence at the Lund Hill inquest, and it was upon his recommendation that I was engaged by my present employer, Mr. Heath. I have been with Mr. Heath about eight years.

Mr. Macdonald.—Had you the management of the underground workings or not?

Mr. Emberton could not see what this had to do with the inquiry.

Mr. Dickson a (juryman) thought Mr. Macdonald should be allowed to proceed. The jury had invited inquiry, and therefore he had a right to put these questions.

Mr. Coe.—Up to January I had the sole management; after that Mr. Holt was manager, and I only remained until I could suit myself. I had the management of the underground workings under Mr. Holt.

The Deputy Coroner.—Then you were responsible.

Mr. Coe.—We were both responsible. I cannot distinguish between a manager and a bailiff. Everybody is responsible in a colliery.

Enoch Jackson, collier, said—In September last, Charles Lawton, under bailiff, engaged me and my brother to act as firemen at the North Stafford pit. I entered on my engagement on the night turn of the 17th of September. Lawton accompanied me through the workings. There was a good deal of gas in the low levels. There were no doors on the main jig, but two cross sheets. I told Lawton there ought to be two doors instead, with two boys to mind them. He said they were as they would have to be. I saw gas in the pit during the whole of that turn. I returned to work on the evening of the 18th. The gas then had very much increased in the lower levels. It was caused by the sheets having been torn down on the main jig by the waggons passing through. I was engaged during the greater part of the night in endeavouring to get them up again.

Mr. Macdonald.—From your first entering upon your duties did you see any smoking?

Witness.—Yes; I smoked myself.

Mr. Macdonald.—Did you ask Charles Lawton whether you might smoke, and did he allow you?

Witness.—Yes.

Mr. Macdonald.—Did Lawton sit down beside you while you were smoking?

Witness.—Yes.

The Coroner here directed that Lawton should be sent for.

The Witness.—It was close to the bottom of the pit where Lawton saw me smoke I saw shots fired not far from the low levels, where there was gas. I was never informed that it was my duty as fireman to examine the lamps. I saw two men with lamps, and one of them said I might please myself whether I examined them or not, for they had not been examined before. I examined them, and found them unlocked. It was Samuel or Joseph Johnson, or else Thomas Froggatt, who spoke. I worked that night, but never went into the pit again. I saw several men and boys smoking, but I did not know their names.

Mr. Macdonald.—Will you tell the jury why you did not return to the colliery?

Witness.—Because I durst not. I had had plenty while I was there. It was because there was so much gas, and no means of getting rid of it.

A Juryman.—That was your opinion.

Mr. Macdonald.—Yes; and he saved his life by his opinion.

By the Deputy Coroner.—I do not know what was done in the pit from the 18th of September to the time of the explosion.

By a Juryman.—I never read the rules of the colliery, and never saw any.

The Juryman.—Were they not bound to give you a copy of the rules?

The Coroner.—No; not by the present Act of Parliament.

Witness.—I should think it was their duty to put the rules where people could see them.

Mr. Dickson.—Was it not your duty, as fireman, to report the men for smoking?

Witness.—No. I considered Lawton was my master.

By a Juryman.—What are you doing now?

Witness.—Getting coal. If a person were to give me leave, I should smoke a pipe at the colliery where I am now employed. It would not be my business to report anybody for smoking there. If I were the fireman, and the rules said it was my duty to do so, and I knew the rules, it would be different. About three shots were fired on the night of the 17th September. I lighted my pipe by a naked flame. Lawton was present.

By the Deputy Coroner.—I lighted my pipe in the return air, not far from the bottom of the pit.

By the Coroner.—I had not seen the rules in the office at the colliery.

Mr. Emberton.—Was it not the duty of Lawton to give him a copy of the rules, Mr. Coroner?

The Coroner.—By the former Act the proprietors were bound to deliver to every man a copy of the rules, but that has been altered.

Mr. Macdonald.—But, under the 15th section of the present statute, the proprietors, under a heavy penalty, are bound to place the rules where the workmen can see them.

The Coroner.—Mr. Keary has evidence upon that point. At present, a collier is not entitled to a copy of the rules, unless he applies for them.

Mr. Wynne.—It was very much against my will that the law was altered. Formerly the proprietors were bound to supply every man with a copy of the rules before he went to work, but Parliament, in its wisdom, decided that they should only be bound to supply copies on demand. The law at present provides that the rules shall be exposed in the office of the colliery, and that if a man ask for a copy it shall be given to him.

Mr. Emberton.—How can a man be punished unless he has an opportunity of knowing what is right and what is wrong?

Witness (to Mr. Keary).—I have worked at Messrs. Bidder and Elliot's several years —for one year as deputy overman. I know there are rules there. Of course there should be rules for every colliery. I did not ask to see the rules at this colliery. I know the general duties of a fireman.

Mr. Keary.—Do you not know it is his duty to see that no shots are fired unless the place is safe?

Witness.—They differ in various places.

Mr. Keary.—I speak of all places where safety lamps are used. Was it not the duty of the fireman to see that shots were not fired if there was any gas?

Witness.—The men sometimes fired their own shots.

Mr. Keary repeated the question again, and the witness then answered it in the affirmative. He continued: My lamp was not extinguished when I tried the gas. I did not try it to that extent. Sometimes my lamp would fill accidentally. Four men were working in the lower levels, where I found the gas, but they did not say anything about it. A man named Lovatt came to me, and said the pit was filling with gas, because the cross sheets were down, and I went and put them up. The gas was two feet deep over Lovatt's head after he had complained. I did not report this circumstance, because I did not consider it was my province to do so. I left because I thought my life was in danger.

Mr. Keary.—Did you not consider that to a certain extent you were in authority over the colliers there?

Witness.—Yes.

Mr. Keary.—Did you not think it was a part of your duty to warn the men if you found them working in an unsafe place?

Witness.—Of course it was, but when the man over you sees it, it is his duty.

Mr. Keary.—Did you tell Lawton you thought the pit unsafe?

Witness.—It would have been a curious affair for me to have told Lawton that—to have instructed him in such a matter.

Mr. Keary.—Then you did not tell him?

Witness.—No. I should have been acting out of my place.

Mr. Keary.—You thought the men's lives were in danger?

Witness.—Yes.

Mr. Keary.—And that you would be stepping out of your place if you told Lawton what was the state of the pit?

Witness.—I had nothing at all to do with it. (Sensation.) When there is a man over me, I have to obey his orders. I have been abused before now for going over my master. I did not know there were any rules. Six or seven years ago I worked at the same pit. I might have read the rules then. I had a copy given to me. I saw smoking in the lower levels at the bottom of the main jig. I smoked in the tunnel. Lawton saw me smoking close to the head of the tunnel.

By Mr. Wynne.—I cannot tell where the air came into the jig that night. I consider it is safe to light a lamp in the return air after it has been through the mine, but not always. I was never informed that the fireman ought to take the top off his lamp in some place other than the return air. At certain times the return air is as clear as the air in this room. This mine was more fiery at some times than others. I am a practical man, and I ought to know what is right, and I say the lamp-top might have been safely taken off in the return air. I think I have no right, as a fireman, to remove men working in dangerous places.

Mr. Evans to Mr. Macdonald.—Do you think any man of common sense would have allowed the men to work there?

Mr. Macdonald.—No; but he tells you that it was Lawton's duty to look after them.

The Deputy Coroner.—And you have his statement that he did not inform Lawton of the state of the pit.

Mr. Macdonald.—And you have his statement that he had no power to inform him. (Laughter.)

William Jackson, brother of the last witness, was then called by Mr. Macdonald.—He said he was engaged as fireman at the same time as his brother, and was to take the day turn. On the 18th of September, he found gas in the lower levels. On the following morning they were in a much worse state, and the men were not allowed to go to work. The levels were full of gas. He was ordered to alter a brattice, and hang another drop sheet, in order that another up-place might be started. The drop sheets in the jig were frequently pulled down by the trains passing through. He saw smoking during the two days he was there. He saw Edward Dutton, a doggy, smoking with his brother. Lawton was standing by at the time. The men fired their own shots. He could not recollect that any one ordered him to take charge of the firing of the shots. He left because he did not like the work, and also because the condition of the colliery was such that he was afraid to stay. He was not so much afraid of the amount of gas as he was of the smoking. No shots were fired while he was in the pit.

By a Juryman.—Nicholas Fletcher would not allow shots to be fired in one place because there was gas in it.

By Mr. Keary.—Seven years ago he worked in the same pit, and had a copy of the rules given to him. He did not know what a fireman's duties were. When he left the pit in September last he asked for his liberty from Mr. Nicholls, and all he told him was that he did not understand the work. Mr. Nicholls never saw any one smoking in the pit to his knowledge. He was present when Dutton was smoking, but whether he saw him or not he could not say, because they were all standing together. That was in the middle level, a few yards from the mouthing. Nicholas Fletcher was present at the time. He (witness) considered that the pit was dangerous for the men he left behind, if they could think so. He did not know it was his duty to mention the dangerous state of the pit to anybody.

By Mr. Wynne.—It was not a proper thing to expose the flame of a lamp in the top of the tunnel.

Mr. Macdonald said he could call a dozen more witnesses, if necessary, but they would only corroborate what had been already said. He submitted that he had made good the statement which he originally made.

Mr. Keary remarked that Mr. Macdonald must not assume that he had verified his statement. He was prepared to put a very different complexion upon it.

John Kent was then called by Mr. Macdonald, at the suggestion of Mr. Wynne. He said he had worked at the colliery, and had smoked while at work. He could not say he had seen Lawton smoke. He (witness) smoked just when he wanted, and he had seen other men smoke. He had a false key to his lamp, but he had thrown it away. (Laughter.) It was a customary thing for the men to use false keys. He had fired a good many shots himself—he could not tell how many. Neither Lawton or anybody else ever cautioned him against doing so, nor told him that he was acting contrary to the rules. He fired with touch-paper, and took his lamp top off to light it. (Laughter.)

Mr. Emberton rebuked the unseemly mirth excited by some of the witness's answers.

By a Juryman.—He complained to Nicholas Fletcher that there was gas in the pit.

By Mr. Keary.—A man named Draycott fired a shot on one occasion, and caused a small explosion, but nobody was hurt. Draycott was turned away at once.

By a Juryman.—Was that all that was done to him?

Witness.—For all I know.

By Mr. Keary.—He knew that there was a rule that the shots must be fired by the fireman. He fired his shots himself, because it was the custom to do so throughout the pit.

By the Jury.—He had heard the men complain of the place being unsafe from gas.

Mr. Wynne.—Have you not told persons since the explosion that you lighted your pipe at Lawton's lamp?

Witness.—He might have done so. He believed he did, but he did not recollect.

By Mr. Macdonald.—Powder was bought and sold in the pit.

By Mr. Wynne.—He had seen two quarter barrels of powder sent down the pit at one time.

Samuel Highfield stated that he worked in the pit four months before the accident, and saw gas several times in the lower levels, but not enough to prevent him from working.

The Coroner then summed up the evidence with his accustomed care. He complimented the jury on the attention they had paid to the evidence, and said he thought they would have little doubt as to the immediate cause of the catastrophe. The law of the case might be taken to be, that if the person whose duty it was to cause a mine to be properly ventilated, by causing an air heading to be put in where necessary, omitted to do this, and another was killed by an explosion of fire damp, he was guilty of manslaughter. Or, in other words, if he omitted to take ordinary and reasonable precautions in not putting in an air heading, where a man using ordinary diligence would have done so, he was guilty of manslaughter. That of course presupposed that the manager of a colliery had acted in a thoroughly reckless and careless manner. If they thought there was evidence to show that the manager had acted in such a manner in this case, it would be their duty to return a verdict of manslaughter. On the other hand, Mr. Justice Patteson said it was perfectly clear that no man could be indicted for manslaughter for a mistake or error of judgment; if he acted to the best of his judgment and ability in the discharge of his duty he was not criminally responsible; but if a person placed in a situation of great responsibility and trust conducted himself with gross negligence and inattention, and death ensued, he was clearly guilty of manslaughter. The jury would therefore have to ask themselves whether they thought Mr. Nicholls (for he left Mr. Johnson out of the question) had been guilty of such reckless and negligent conduct as made him criminally responsible, or whether he had committed an error of judgment. The Coroner intimated that he thought the unfortunate man Lismore, by lighting his pipe, had been the direct cause of the explosion, and that the utter recklessness displayed by the men made it almost impossible to keep the mine safe. He then touched upon the conflicting nature of the scientific evidence as given on the one hand by Government Inspectors, and on the other by the colliery proprietors and managers who had been examined; after which, he eulogized warmly the bravery of those who descended the pit soon after the accident for the purpose of endeavouring to save the lives of their fellow-creatures, and referred to the handsome subscription which had been entered into for the relief of those bereaved. He then asked the jury whether they could place their finger upon Mr. Nicholls, and say he was guilty of manslaughter. For himself, he thought there was nothing in his conduct which made him criminally liable; but if the jury could point out any particular in which an improvement could be made in the management of the colliery, he was convinced, from his knowledge of the parties, that Mr. Johnson and Mr. Nicholls would pay the best attention to their recommendations.

The jury then retired, and after an absence of upwards of an hour returned with the following verdict:—

"We find that Nicholas Fletcher and 90 others met their death by an explosion of gas in the North Staffordshire Iron and Coal Company's Banbury Mine, on the 13th of December last. No positive evidence has been brought before us to show how the accident occurred; but we are of opinion that an accumulation of gas had taken place in some of the lower workings, in consequence of the upsetting of a train of coals in a doorway, and that the gas coming in contact with a naked light, unlawfully exposed by one of the miners, exploded. We find that if the rules and regulations made by the managers of the pit had been carried out as they *ought* to have been by their subordinates, the explosion might not have taken place. We regret to see the culpable negligence shown by James Bossons and Charles Lawton in violating the rules made for the protection of life and property in the pit. We should suggest that means be adopted by Mr. Nicholls, the underground-bailiff of the mine, for carrying out more strictly the rules of the pit with regard to the men firing their own shots, brushing out the gas themselves, smoking pipes, and re-lighting their lamps in the return air. We cannot too strongly urge upon the Government the necessity of appointing additional inspectors of mines."

The Coroner.—Then, irrespective of the observations you have thought it your duty to make, you find that the deceased persons came by their death in an accidental way by an explosion of fire-damp.

The Foreman.—We do.

The signatures of the jury having been obtained to the verdict, they were discharged by the Coroner, who in Her Majesty's name thanked them for their valuable services.

At the Jackfield Colliery, Burslem, four lives were lost by an explosion of fire-damp caused by gross neglect in not distributing the air, always at command in this pit, so as to keep the working places clear of gas instead of allowing it to accumulate until the men thought proper to *brush* it out, a practice that no good manager would think of allowing. Here, as in many other places, shots were fired in drifts where gas was known to exist without the slighest precautions being taken to prevent the gas firing, relying on the Davy lamp for safety rather than on good healthy ventilation.

I have long been of opinion that it is a farce to allow powder to be used in those workings where safety lamps are exclusively used, and I hope to see the day when it will be strictly prohibited, not that much less powder will be used, but more competent men will be employed to conduct the operations of mining, and owners will find that it is cheaper to employ men of known ability rather than those well meaning but ignorant persons whose mistakes are tolerated because the owner neither sees nor hears of what is going on underground or he would soon find that good management is the cheapest, and reduces fatal accidents to a minimum.

At High Carr, near Tunstall, one life was lost, and the same tale had to be told. An ironmaster owned the colliery; a totally unfit person was placed to manage it, men were sent to work in a heading known to contain gas, and on firing a shot the gas exploded. This being so flagrant a case I caused an information to be laid against the owner for a breach of the 1st general rule, and a fine of 5*l.* was inflicted, and also against the chartermasters for allowing the men to work in a foul place, for which they were fined 40*s.*; but I am sorry to say the manager escaped by a technical objection.

A great deal has lately been said and written about more inspection being the only preventive that can be applied to lessen the nnmber of accidents; but in my opinion that is not the most likely remedy, for in this case I carefully inspected the colliery only three weeks before, when I pointed out the dangerous state of it and was assured nothing more should be done until the mine was put in a safe and proper condition; but either from cupidity or the want of knowledge of the danger, the mine was continued working. What is far more likely to prevent serious accidents, is the appointment of efficient managers at every colliery, so that the mine and the miners may be as well looked after as if an inspector were resident on the mine; without this, accidents will occur.

Four lives were lost by explosion at the Glebe Colliery, near Fenton, through the obstinacy of the head sinker, who was warned over and over again not to take a naked light down the pit as they had struck the coal a short time before and gas was likely to be given off; but as soon as the manager had left the pit top, about nine o'clock at night, the head sinker went down with a naked candle causing the death of four men, himself narrowly escaping. In this case my opinion was strongly in favour of a verdict of manslaughter; but the jury thought otherwise, and the man escaped the punishment he so richly deserved.

Two other explosions have occurred during the year which call for no comment, as such slight cases will occur in well regulated collieries; but I am decidedly of opinion that serious explosions are preventible, not, as I said before, by excessive inspection paid for by the State, but by necessary and skilful inspection paid for by the owner of each colliery.

Falls of Roof and Coal.

The accidents under this head are less in number, and the loss of life is also less than in any former year, which somewhat bears out my opinion that this class of colliery accident may be kept within reasonable bounds if due care is taken to prop the roof whether danger be foreseen or not, for nothing tends more to endanger the lives of colliers than that false security which is engendered by "knocking" on the roof with the pick, and because it sounds solid from its thickness, going to work under it, instead of setting up a prop or two to make it really secure. It is but just to observe that a vast improvement in the system of timbering has taken place within the last few years, owing in a great measure to the workmen themselves seeing the advantage of obeying a rule made for their own protection rather than pursuing the old irregular mode of timbering that had no rule of guidance but the convenience of removing the fallen coals. Wherever the underlookers insist on the timber being set, whether wanted or not, very few lives are lost by falls of roof or coal.

In Shafts.

Under this head there is no decrease, nor do I expect any so long as the old mode of winding coals is continued to such an extent in my district;—for the top of the shaft cannot be made close and safe where guides are not used; nor can the sides of the shaft be kept in thorough repair whilst large corves or skeps are loosely banging from side to side with every draught of coal which is raised to the surface;—it is therefore much to be desired that in all new recoveries or winnings the use of proper guides should be enforced.

Miscellaneous Causes.

Under the head of miscellaneous accidents underground, comes those numerous ones that occur on inclined planes and horse roads, the work on which is particularly dangerous, and is generally performed by boys or other young persons who are least likely to take care of themselves. It cannot be too strongly impressed on those engaged that they should never go before the tubs when starting them down the incline, nor when the tubs get off the rails attempt to replace them without the assistance of an extra man, nor attempt to *catch* the tubs at the bottom of the jig, for although it is much easier to twist round the tubs whilst in motion it is highly dangerous to do so. Several lives have been lost and many limbs broken through boys attempting to unfasten the horse from the tubs whilst in motion; and the roadman and the hooker-on should have strict orders to report every case of the kind that comes under their notice.

Above-ground Accidents.

Of the six lives lost above-ground, two were crushed between trucks on the railway which can hardly be considered a mining accident, and two by a boiler explosion, being the result of malconstruction of the boiler which exploded within a few days of its coming into use. Here was a case of a young man being entrusted with the designing and making a boiler who did not know even the first rudiments of boiler construction, or what form was adapted to resist the pressure of steam. These are the only lives that have been lost by boiler explosions in my district during the last nine years.

Ironstone Mines.

The loss of life has been serious during the year; but when we consider the large quantity of mine that has been raised from the thick seams of North Stafford and the dangerous nature of such seams, we must not expect to be free from severe and heavy falls of stone with even the best of propping; still all that has been said about coal applies in a still greater degree to ironstone, because very large masses come down at times with but little warning. I have, &c.

THOMAS WYNNE.

The Right Hon. Spencer H. Walpole, M.P.,
Her Majesty's Principal Secretary of State, Whitehall, London.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS OF LIFE arising therefrom, in the NORTH STAFFORD, SHROPSHIRE, and CHESHIRE DISTRICT, during the YEAR ended 31st December 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Totals.
1866.														
Jan. 1	1	Sneyd Green -	Burslem - -	Silversdale Company -	Hy. Jackson -	Hooker-on -	23	Crushed in the shaft (descending) -	–	–	1	–	–	
" 5	2	Foley - -	Longton - -	W. H. Sparrow and Son -	E. Procter - -	Collier -	42	Fall of roof - - - - - -	–	1	–	–	–	
" 22	3	Lilleshall -	Wellington -	Lilleshall Company -	T. Ferreday -	Sinker -	—	Scaffold fell whilst repairing shaft -	–	–	1	–	–	
" 26	4	Shelton - -	Hanley - -	Earl Granville - -	J. Moorcraft -	Ditto -	20	Dip chain broke - - -	–	–	–	1	–	
" 29	5	Bignall Hill -	Newcastle -	N. P. Wood - -	S. Johnson - -	Ditto -	—	Explosion of fire-damp - - - -	1	–	–	–	–	5
Feb. 12	6	Bradley Green	Congleton -	W. Bradbury - - -	Wm. Lancaster -	Waggoner -	16	Fall from the side - - - -	–	1	–	–	–	
" 14	7	Astley - -	Dukinfield -	Dunkirk Company -	W. Gaskell - -	Ditto -	—	Crushed on a jig - - - - -	–	–	–	1	–	
" 15	8	Lilleshall -	Wellington -	Lilleshall Company -	Thos. Mytton -	Driver -	15	Crushed on a road - - - -	–	–	–	1	–	
" 22	9	Glebe - -	Fenton - -	Challinor and Co. - -	W. Rogers - -	Banksman -	22	Fell down shaft - - - - -	–	–	1	–	–	
" 27	10	Silverdale -	Newcastle -	Silverdale Company -	T. Ratcliffe -	Ditto -	40	Fall down shaft - - - - -	–	–	1	–	–	5
Mar. 3	11	Talk-o'th'-Hill	Newcastle -	North Stafford Coal Company. -	Jas. Hulme - -	Driver -	22	Crushed on a jig - - - - -	–	–	1	1	–	
" 6	12	Bunkers Hill -	Newcastle -	Rigby and Co. - -	E. Charlsworth -	Collier -	34	Fall of roof - - - - -	–	1	–	–	–	
" 9	13	Stanfield -	Burslem - -	Cork and Ford - -	T. Moseley -	Ditto -	18	Fall of coal - - - - -	–	1	–	–	–	
" 11	14	Botteslow -	Hanley -	Pratt and Crewe - -	T. Hannan - -	Ditto -	20	Crushed on an incline - - -	–	–	–	1	–	
" 22	15	Lilleshall -	Wellington -	Lilleshall Company -	Wm. Tranter -	Hooker-on-	17	Rock fell out of side of shaft - -	–	–	1	–	–	
" 30	16	Bank Top -	Burslem - -	Jas. Stott - -	H. Baddeley -	Collier -	19	Fall from side - - - - -	–	1	–	–	–	6
Apr. 4	17	Walsall - -	Ludlow - -	Mrs. Botfield - -	J. Warrington -	A boy -	—	Waggon went over him on road -	–	–	–	1	–	
" 5	18	Fenton Park -	Longton - -	Jas. Stott - - -	J. Hare - -	Banksman -	44	Rope broke at the drum and drew him into the pit.	–	–	1	–	–	
" 6	19	Jackfield -	Burslem - -	Plant and Co. - -	E. Cope and 3 others	Colliers -	—	Explosion of fire-damp - - -	4	–	–	–	–	
" 13	20	Bentilee -	Longton -	Hawley and Co. - -	J. Cadman - -	Collier -	27	Crushed by cage against the inset -	–	–	1	–	–	
" 30	21	Botteslow -	Hanley - -	Pratt and Crewe -	R. Sawyer -	Ditto -	31	Fall of roof - - - - - -	–	1	–	–	–	8
June 8	22	High Carr -	Tunstall - -	W. Bates - -	S. Thompson -	Ditto -	22	Explosion of fire-damp - - -	1	–	–	–	–	
" 14	23	Dukinfield -	Ashton - -	F. D. P. Astley - -	Geo. Phillips and 37 others.	Colliers -	—	Ditto - - - - - - -	38	–	–	–	–	
" 21	24	Clough Hall -	Tunstall - -	Kinnersley - -	S. Ball - -	Collier -	60	Smothered by dirt falling on him -	–	–	–	1	–	
" 28	25	Brownlees -	Tunstall - -	Williamson, Brothers	J. Morris - -	Ditto -	22	Fall of roof - - - - -	–	1	–	–	–	41
July 12	26	Shelton - -	Hanley - -	Earl Granville - -	T. Williams -	Ditto -	37	Crushed by tubs - - - - -	–	–	–	1	–	
" 18	27	Pinnox - -	Tunstall - -	H. H. Williamson	Jas. Wright - -	Labourer -	50	Crushed between waggons - -	–	–	–	–	1	
" "	28	Glebe - -	Fenton - -	Challinor and Co. - -	Burgess and 3 others	Sinkers -	—	Bxplosion under scaffold - -	4	–	–	–	–	
" 28	29	Pinnox - -	Tunstall - -	H. H. Williamson	S. Chadwick -	- -	27	Explosion of a boiler - - -	–	–	–	–	2	8
Aug. 20	30	Brookhouse -	Hanley - -	Pratt and Crewe -	Geo. Nixon - -	Collier -	28	Fall of coal - - - - - -	–	1	–	–	–	
" "	31	Lilleshall -	Wellington -	Lilleshall Compony -	S. Edge - -	Driver -	19	Horse fell upon him in the road -	–	–	–	1	–	
" 23	32	Dunkirk -	Dukinfield -	Dukinfield Company -	Jos. Norris - -	Engineman	—	Fell from the head gear - -	–	–	–	–	1	3

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Totals.
1866.														
Sept. 14	33	Talke'o'th'Hill	Newcastle -	North Stafford Company -	Peter Finney -	Driver -	14	Crushed between tubs - - -	–	–	–	1	–	
„ 22	34	Berry Hill -	Hanley - -	William Bowers - -	John Ellis - -	Butty -	50	Fell out of cage whilst repairing signal wire.	–	–	1	–	–	2
Oct. 3	35	Poole Dole -	Fenton - -	William Hulse - -	R. Jones - -	Loader -	17	Explosion of fire-damp - - -	1	–	–	–	–	
„ 23	36	Sneyd Green -	Burslem - -	Silverdale Company -	E. Lanton - -	Engineman	20	Scalded whilst repairing valve -	–	–	–	–	1	
„ 24	37	Lawton -	Tunstall - -	Bidder & Co. - -	J. Stubbs - -	Labourer -	—	Crushed between trucks - -	–	–	–	–	1	
„ „	38	Shelton - -	Hanley - -	Earl Granville - -	J. Bellis - -	Driver -	11	Fall of roof - - - - - -	–	1	–	–	–	
„ 31	39	Norbury -	Stockport -	Clayton and Brook -	W. Gorstey - -	Jigger -	15	Crushed on jig brow - - -	–	–	–	1	–	
Nov. 8	40	Bunker's Hill -	Newcastle -	Rigby & Co. - - -	S. Brownsword -	Driver -	13	Crushed between waggons - -	–	–	–	1	–	5
„ „	41	Weston Coyney	Longton - -	Bishop & Co. - - -	J. Hewitt - -	Collier -	—	Fall of roof - - - - - -	–	1	–	–	–	
„ 9	42	Lawton - -	Tunstall - -	Bidder & Co. - - -	J. Warren - -	Ditto -	20	Explosion of fire-damp - - -	1	–	–	–	–	
„ 23	43	Madeley Wood	Wellington -	Anstice & Co. - -	W. Kirkham -	Sinker -	56	Rock fell from side of shaft - -	–	–	1	–	–	
„ 26	44	Talk-o'th'-Hill -	Newcastle -	North Stafford Company -	John Dudley -	Driver -	14	Fell from 7-ft. mouthing to 8-ft. -	–	–	1	–	–	
„ 28	45	Silverdale -	Ditto - -	Silverdale Company -	G. Downing -	Butty -	34	Fall of coal - - - - - -	–	1	–	–	–	
Dec. 8	46	Dunkirk -	Dukinfield -	Dunkirk Company - -	A boy - -	Loader -	—	Explosion of fire-damp - - -	1	–	–	–	–	6
„ 13	47	Talk-o'th'-Hill-	Newcastle -	North Stafford Company -	N. Fletcher and 90 others.	- - -	—	- - - - - -	91	–	–	–	–	92
								Total - - - -	142	11	10	12	6	181

SUMMARY.

Cause of Death.	Jan.	Feb.	March.	April.	May	June.	July.	August.	Sept.	October.	Nov.	Dec.	Total.	Increase.	Decrease.
Explosions - -	1	–	–	4	–	39	4	–	–	1	1	92	142	139	–
Falls of Roof -	1	1	3	1	–	1	–	1	–	1	2	–	11	–	11
In Shafts - -	2	2	1	2	–	–	–	–	1	–	2	–	10	1	–
Miscellaneous -	1	2	2	1	–	1	1	1	1	1	1	–	12	6	–
Above ground -	–	–	–	–	–	–	3	1	–	2	–	–	6	3	–
	5	5	6	8	–	41	8	3	2	5	6	92	181	129	–
No. of accidents -	5	5	6	5	–	4	4	3	2	5	6	2	47	2	–

Deaths in North Staffordshire,	133;	increase, 97.
„ Shropshire, - -	6;	decrease, 3.
„ Cheshire, -	42;	increase, 35.
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NUMBER and NATURE of FATAL ACCIDENTS to PERSONS employed in and about COAL MINES and COLLIERIES in the District comprising NORTH STAFFORD, SHROPSHIRE, and CHESHIRE, during the Years 1862, 1863, 1864, 1865, and 1866.

Year.	—	Explosions of Fire-damp.	Falls in Mine.			In Shafts.									Miscellaneous Underground.									On Surface.				Gross Totals.
			Falls of Coal.	Falls of Stone.	Total Falls in Mines.	Overwinding.	Ropes and Chains Breaking.	Whilst ascending or descending.	Falling into Shaft from Surface.	Things falling from Surface.	Falling from part way down.	Things falling from part way down.	Miscellaneous in Shafts.	Total in Shafts.	Explosions of Gunpowder.	Suffocation by Gases.	Irruptions of Water.	Falling into Water.	On Inclined Planes.	By Trams and Tubs.	By Machinery Underground.	Sundries Underground.	Total { Miscellaneous Underground.	By Machinery on Surface.	Boilers Bursting.	Miscellaneous on Surface.	Total on Surface.	
1862	Number of Accidents - - -	4	9	16	25	–	1	1	2	1	2	–	1	8	–	–	1	–	5	2	2	1	11	1	–	–	1	49
,,	Number of Deaths - - - -	6	9	16	25	–	12	1	2	1	2	–	1	19	–	–	3	–	5	2	2	1	13	1	–	–	1	64
1863	Number of Accidents - - -	9	4	10	14	1	1	1	3	–	2	3	–	11	–	–	–	1	3	2	–	2	8	–	–	1	1	43
,,	Number of Deaths - - - -	11	4	11	15	1	1	1	3	–	2	3	–	11	–	–	–	1	3	2	–	2	8	–	–	1	1	46
1864	Number of Accidents - - -	13	4	9	13	–	2	1	4	–	3	1	–	11	1	1	–	–	1	2	–	–	5	2	–	1	3	45
,,	Number of Deaths - - - -	22	4	9	13	–	2	1	4	–	3	1	–	11	1	1	–	–	1	2	–	–	5	2	–	1	3	54
1865	Number of Accidents - - -	6	9	13	22	2	1	1	2	–	2	–	–	8	1	–	–	–	2	2	1	1	7	2	–	–	2	45
,,	Number of Deaths - - - -	12	9	13	22	2	1	1	2	–	3	–	–	9	1	–	–	–	2	2	1	1	7	2	–	–	2	52
1866	Number of Accidents - - -	9	3	8	11	–	–	2	3	–	3	2	–	10	–	–	–	–	5	5	–	2	12	1	1	3	5	47
,,	Number of Deaths - - - -	142	3	8	11	–	–	2	3	–	3	2	–	10	–	–	–	–	5	5	–	2	12	1	2	3	6	181

LIST of the FATAL IRONSTONE ACCIDENTS, and LOSS of LIFE arising therefrom, in the NORTH STAFFORD, SHROPSHIRE, and CHESHIRE DISTRICT, during the Year ending 31st December 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Totals.
1866.														
Jan. 3	1	Glasshouse -	Newcastle - -	Glasshouse Company -	A. Yoxall - -	Butty -	42	Dip chain broke - - -	–	–	–	1	–	
„ 10	2	Jackfield -	Burslem - -	Plant and Co. - -	T. Pointon - -	Ditto -	43	Fell part way down shaft -	–	–	1	–	–	
„ 18	3	Lowlands -	Tunstall - -	Williamson, Brothers -	W. Gallimore -	Miner -	35	Fall of stone - - -	–	1	–	–	–	
„ 20	4	Mill Bank -	Newcastle - -	Harvey and Co. - -	C. Tomkinson -	Hooker-on -	15	Drawn part way up the pit -	–	–	1	–	–	4
Feb. 16	5	Lowlands -	Tunstall - -	Williamson, Brothers -	S. Plant - -	Miner -	58	Fall of stone - - -	–	1	–	–	–	1
Mar. 27	6	Hamill - -	Burslem - -	N. P. Wood - -	D. Harding - -	Ditto -	28	Ditto	–	1	–	–	–	1
Apr. 9	7	Clanway -	Tunstall - -	H. Clive - -	J. Copeland & another	Ditto -	—	Ditto - - -	–	2	–	–	–	
„ 18	8	Silverdale -	Newcastle - -	Silverdale Company -	W. Mansell - -	Ditto -	30	Ditto - - -	–	1	–	–	–	3
May 29	9	Clough Hall -	Tunstall - -	Kinnersley and Co. -	J. Goodman -	Ditto -	16	Ditto - - -	–	1	–	–	–	1
June 16	10	Longton Hall -	Longton - -	I. & A. Glover - -	E. Whittaker -	Ditto -	24	Fell out of skep while ascending	–	–	1	–	–	1
July 7	11	Hadley - -	Wellington - -	Lilleshall Company -	E. Griffiths - -	Ditto -	29	Fall of roof - - -	–	1	–	–	–	
„ 25	12	Shelton - -	Hanley - -	Earl Granville - -	T. Heath - -	Ditto -	18	Crushed by tubs on incline -	–	–	–	1	–	2
Aug. 20	13	Priors Lee -	Wellington - -	Lilleshall Company -	E. Armstrong -	Ditto -	17	Explosion of fire-damp -	1	–	–	–	–	1
Sept. 10	14	Hem Heath -	Newcastle - -	Hem Heath Company -	T. Williams - -	Sinker -	42	Scaffold broke - - -	–	–	1	–	–	
„ 13	15	Knutton -	Ditto - -	W. F. Gordon - -	John Hall - -	Miner -	37	Fall of roof - - -	–	1	–	–	–	
„ 19	16	Talke - -	Ditto - -	North Staffordshire Co. -	John Capper -	Ditto -	55	Crushed on jig brow - -	–	–	–	1	–	
„ 21	17	Silverdale -	Ditto - -	Silverdale Company -	John Harper -	Ditto -	45	Fall of stone - - -	–	1	–	–	–	4
Oct. 8	18	Foley - -	Longton - -	W. H. Sparrow and Son -	F. Beeston - -	Loader -	15	Ditto - - - - -	–	1	–	–	–	1
Nov. 6	19	Ternhurst -	Tunstall - -	F. Bankhart - -	——	Engineman	—	Fell whilst changing a bucket	–	–	1	–	–	
„ 22	20	Silverdale -	Newcastle - -	Silverdale Company -	R. Welsh - -	Miner -	23	Fall of stone - - -	–	1	–	–	–	2
Dec. 28	21	Dawley - -	Wellington - -	Coalbrookdale Company -	G. Gregory - -	Ditto -	—	Fall of roof - - -	–	1	–	–	–	1
								Total - -	1	13	5	3	–	22

SUMMARY.

Cause of Death.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	Total.	Increase.	Decrease.
Explosions - -	–	–	–	–	–	–	–	1	–	–	–	–	1	–	–
Falls of Roof -	1	1	1	3	1	–	1	–	2	1	1	1	13	3	–
In Shafts - -	2	–	–	–	–	1	–	–	1	–	1	–	5	1	–
Miscellaneous -	1	–	–	–	–	–	1	–	1	–	–	–	3	1	–
Above ground -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	4	1	1	3	1	1	2	1	4	1	2	1	22	5	–
No. of accidents -	4	1	1	2	1	1	2	1	4	1	2	1	21	5	–

Deaths in North Staffordshire, 19 ; decrease, 10.
„ Shropshire - 3 ; „ 5.
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Mr. Brough's Report.

Report of the Working of the Mines Inspection Act (23 & 24 Vict. c. 151.) for the South-western District, during the Year ended 31st December 1866.—By Lionel Brough, Esq., F.G.S.

Sir, Clifton, 1st March 1867.

I have the honour to lay before you the "Lists" of the south-western mining division of the kingdom for the year ended the 31st day of December 1866. They are in substance a complete record of every accident of which notice was handed in, both as regards coal and ironstone, and also whether fatal or only attended with personal injury; each item is complete in its kind, and every description circumstantially correct, I beg, therefore, permission to solicit particular attention to the matter they contain.

I have been very careful with these "Lists," in order that the body of the report (with three exceptions) might not be burthened with a repetition of painful and melancholy details.

"Fire-damp," which always takes the lead both in list and report, mitigated itself in a remarkable degree in the collieries of the district during 1866, only six persons having been killed in five separate accidents; whereas, in the preceding year, 26 men and boys were swept from life by one single explosion.

"Falls of coal and stone" come next; but those casualties unfortunately became more serious, the lives lost standing at 38 in 1866, and only at 34 in the previous year.

As regards "pit shafts," I grieve to be compelled to record 20 deaths during the year under notice, against 10 in 1865.

"Miscellaneous causes" also ran up too high, 16 men and boys having lost their lives in all the year; whilst in 1865 eleven only perished, and even that number was too great.

In relation to "aboveground accidents," fortunately but one person was killed in 1866, and only one the year before, therefore, though no improvement, there was still no going back.

"Non-fatal casualties" in coal were more numerous in 1866 than in the year before; compared together, they exhibit, in 1865, 96 separate accidents, attended with injury to 111 persons; but in the following year the list contains 109 different accidents, causing hurt to 123 men and boys.

In the ironstone mining department of the district 14 separate accidents occurred in 1866, killing 14 persons; and, as regards death, the like results took place in the immediately preceding year, so that there is no increase of mortality; indeed, comparatively, it is a better statement, inasmuch as the getting of native mine is in the course of augmentation, because of the tough quality which it imparts to the manufactured iron.

Eighteen "non fatal" accidents happened in the year, whereby 20 persons were injured, and these results again are better than in 1865, so that as regards the ironstone mines of the district improvement is evidently progressing.

Separate and independent of all the above, both in coal and in iron, five other fatal events have to be noticed here, though they could not very well find a place in any one of the annual lists.

On the 10th of January, James Harris, a collier, fell down and died whilst walking up the slope in the No. 2 pit, at Sirhowy, and his death was attributed to natural causes; I consequently insert it here instead of in the usual schedule.

William Jenkins, a child of seven or eight years of age, was amusing himself on the surface, on the 12th of May, by riding on the "gug rope," at the Bull Hall Pit in Gloucestershire, when he was suddenly forced under a direction pulley wheel, and killed on the spot.

John Jones, 13 years old, died underground on the 29th of May in the New Tredegar Pit; but it was stated to be from rupture of a blood vessel, therefore I could not add his name to others in the fatal accident list.

On the 6th of October William Jones Flueman, 82, employed in the Ty Trist Pit, Tredegar, was found dead near the furnace; the medical attendant and others were of opinion that his death was sudden, and arose from natural causes, the which, I myself believe. It is to be regretted that so aged a person was permitted to be underground, or to work at all—either in collieries or on the surface.

John Matthews, who was riding on a surface locomotive engine tender on the 20th of December, accidentally fell off, and was killed at the Blaina works. This is more a railway accident than one for the investigation of the inspector of mines.

Every one of these five cases I carefully examined into, and have every reason to think that each record is a true one.

The final classification of all the returns made to me by the proprietors and agents of coal and iron mines will then, this year, be as follows:—

Fatal accidents in coal 75, deaths 81; non-fatal accidents in coal 109, attended with injury to 123 men and boys. Fatal accidents in ironstone 14, deaths 14; non-fatal accidents 18, causing hurt to 20 persons. Casualties from which the lists are free, 5, deaths 5. Altogether 221 separate accidents affecting 243 persons, of whom exactly 100 died in the discharge of their duties and 143 were more or less severely injured. This is a grave return to make for one district in a single year; and its perusal cannot but give rise to painful reflection and to very serious consideration.

I have now to make especial mention of two cases in the colliery list, and one in that of the ironstone mines; these being the three exceptions already referred to. The first occurred on the 20th of June (No. 34 of the List) at the Newbury Colliery, in Somersetshire, in one of a pair of pits of 190 yards each in depth. These were about a dozen feet apart, and had to be cleansed of the *débris* of very many years. The winding of men and of rubbish was performed by a portable agricultural steam-engine of very limited horse power, weighted down on the surface by a few heavy stones, and all the other mechanical contrivances were much about on the same miserable footing. One pit was freed to the bottom, but the other still held some 50 yards of stones, mud, and water, to rid up which they should have commenced on the upper part of the mass at a cross cut already effected between the two shafts, and so have progressed (thurling at every six yards or so going downwards) until the pressure became greatly lessened. Instead of following that prudent course, two persons were put in the bottom of the cleared-out pit, and there, somehow or other, they got a communication made to the other shaft, and disturbed the mass of loose material sufficiently to set it in motion, when, all at once, the stuff came with a run and overwhelmed the workmen and no doubt smothered them in one moment; but, however, no evidence exactly to that effect was elicited at the inquiry, because nearly three days expired before the bodies could be got at and brought to bank; still, the mass of materil was so immense and moved so suddenly that death must have immediately ensued.

The state and condition of those two pits, the inefficiency of the mechanical appliances, the total absence of a banksman, and the implied want of skill and care that accompanied the whole affair, had so much weight with the coroner's jury that a verdict of manslaughter was recorded. At the ensuing Somersetshire assizes the grand jury examined all the witnesses and gave the case a most patient hearing, but they did not consider that the evidence was sufficiently strong to warrant them in the finding of a true bill against the accused parties (the manager and the engineman), and they of course were immediately liberated.

The second of those cases happened on the 29th of October, and in the "List" it is numbered 61. It records the death of William Roach, a collier, working in the No. 21 pit at Ebbw Vale. On the morning of the day named, the first Monday after the pay, when attendance under ground is usually late and lax, two men went to their work at an hour generally considered remarkably early for such a day. When they entered their stall an explosion of fire-damp immediately ensued, and both of them were badly burned. William Roach so severely that he died nine days after the event. I proceeded to the colliery and investigated both site and circumstances, and found that the deputy had not examined the place that morning in obedience to the 13th Special Rule, he having perhaps come late to his work; on the other hand, it was surmised that those two colliers had been too quick for him, having entered the mine through an adit instead of going down the pit in the customary manner, in consequence of which they were half an hour, if not more, in advance of the fireman.

The peculiarities of the case were such, that the jury considered them sufficiently grave to justify a verdict of manslaughter, which was accordingly returned, and the fireman was taken into custody, but, as a matter of course was admitted to bail At the next assizes I shall, with all the other witnesses, have to attend at the county town of Monmouth.

The Vydylog vein of coal in the No. 21 pit at Ebbw Vale never was known in my time to throw off gas, neither, in fact, did it in the case under notice. I found in the course of my inspection that the "thill" (bottom) was violently blown up in that particular stall, and this led to the establishment of the fact, that a mass of interlaminated coal and shale, lying just below the true floor, was the fountain from which the gas rushed forth. This stuff is locally termed "rashings," and it is often the source of mischief, though never before in the No. 21 pit; in it the "rashing" bed is uncertain, sometimes coming in where in reality it belongs below the fire-clay bottom, but far more often absent altogether. I have known the pit for years, and had considered the seam of coal to be as free from gas (which, I repeat, it is) as the Mynnyddysllwyn vein itself. Still, in localities distant from Ebbw Vale, the Vydylog coal is not altogether to be depended on as regards fire-damp. In Wales, as elsewhere, concomitant strata, either above or below workable seams, materially affect the safety of the miner, if not well watched and attended to. I think that in the instance under notice the bursting up of the floor had occurred but just before the two men entered, and had, for a small space of time, overpowered the ventilation and vitiated the atmosphere of that particular stall to such an extent as to catch at the candle the moment the workmen came in.

The last of the three reserved cases is No. 9 of the Ironstone Mine List, and I cannot but say it is as frightfully shocking as it is extremely rare. Notwithstanding all that legislation has done, the deliberate manner in which an Act of Parliament was set at defiance cannot be otherwise designated than as disgraceful. On the 20th of June a woman, named Anne Davis, under 30 years of age, was instantly killed by a heavy fall of stone, in a pit belonging to the Nantyglo proprietors, and all the circumstances of the case, as may be well supposed, underwent strict investigation by the coroner, his jury, and myself.

John Richards was the head contractor of the pit, and also its overman, therefore he was the real officer in charge, hence at the time, and now, in my opinion, he was the chief offender. James Lewis was a contractor under him again, and he it was that actually employed Anne Davies and another girl, because he found their labour cheaper than that of men; this, in fact, he acknowledged when undergoing examination. Thus, for a time, the employment of these women continued, until on the day named in the "List," a heavy fall of rock deprived one of them of life.

After the inquest, and by instructions from the Home Office, I instituted proceedings against both the contractors, and the matter was heard by two justices of the peace for the county of Monmouth at the Tredegar Petty Sessions. James Lewis was convicted in the mitigated penalty of five pounds for the employment of each of the two women, and the case against John Richards was dismissed. At the time my solicitor and myself considered the latter to be the more guilty party of the two, as it was his business to know what was going on in his own pit; indeed, at the inquest he did not deny that he had heard rumours about the girls working underground. In such case it was his duty, as overman of that pit, to have seen into it, and brought the other man to justice. I continue to be of this opinion, that he was by far the most to blame of the two.

The condition of the poor creature, though an unmarried woman, and other circumstances connected with the affair, had produced, as well may be supposed, a sensation of indignation and disgust throughout the entire neighbourhood.

Having now recorded all the usual occurrences and events of 1866, it becomes my duty, as heretofore, to make some general observations on the nature of each separate class of casualty which, year after year, fill up the five columns of the Inspector's Lists.

With explosion I must again commence that which I have to say:—

It would be supererogatory to state that a full amount of air is the first principle to be considered, for without that essential condition all observation and discussion would be futile. Whether this is brought about by the use of furnaces, or by the employment of machinery, the power in either case must still be so contrived as to yield the supply, even in excess, in order to compensate for leakages and for great contingencies. It is of no avail to invest the subject with mystery, or to obscure its simplicity by a cloud of abstruse calculation. There is nothing occult in ventilation; I repeat that it simply involves the power, whatever that may cost, of producing a superabundance of fresh air, and, afterwards, the practical knowledge of its proper distribution underground. It is to the faces of work we require to introduce as much as need be of the life-saving element, and of course a sufficient number of splits must be contrived to carry it to every part of the mine that may be undergoing excavation. But even in this arrangement judgment is required, for too many trickling currents of air would be sure to defeat the object in view. Again, to protect life, the whole work should be laid out in districts and panelled, if such method can possibly be effected, so that should explosion take place in one part of the pit, the people in all the other portions of it may have left to them some chance of escape from death.

In this kingdom it has been often stated, that in mines liable to sudden outbursts of gas, no lamp can be so thoroughly relied on as the "Stephenson;" if this be so, its use should be insisted on. It may be added, that the very condition that requires the agency of an approximately true safety lamp, demands also, that blasting with gunpowder should be entirely done away with.

A never-ceasing and abundant current of fresh air from the surface being then understood to be the *sine quá non*, and that again fairly conducted into all the working places, it follows that the shortest road should be provided for its easy quittance after having become vitiated by the duty it has performed in its tortuous route through every department of the mine. Ample diameter in shafts and great sectional area in every underground road and windway are positive requirements; neither air nor water can be forced through throttled and restricted passages without enormously increased motive-power.

Too much coal should not be extracted by means of a pair of pits, or any other given number of openings, and no split or current of air should be unreasonably lengthened out. Finally, if safety cannot be arrived at by such "given number of openings," then it is but just to say, that more shafts must be thought of; I see no other conclusion that can by any possibility be arrived at. The eager getting of inordinate quantities with limited preparations may be classed amongst the many crude conditions that bring about calamity; indeed, next to feeble and neglected ventilation, a hungry desire to get out coal at every risk and hazard may at once be regarded as one of the leading causes of danger and destruction.

Hurricanes may have something to do with sudden outbursts of fire-damp, even more than is generally supposed. Whenever great storms prevail, and the mercury undergoes change in length of column, then augmented supervision should immediately ensue. It has been observed that when, in boisterous weather, a catastrophe occurs in one locality, it is not always without its parallel elsewhere; it may be in the same district, but it is just as likely to happen a hundred miles or more away. There does appear to be a sort of duality connected with the matter; at all events, explosions certainly are sometimes so coupled together as to lead to the inference that the same hidden influence had exercised itself much about the same time, though in very different localities. This in itself shows that we should pay very great attention to every description of meteorological phenomena.

The barometer has done great service to the coal miner, and its use should be industriously furthered and encouraged. Having always been in the habit of watching this valuable philosophical instrument, I could not be otherwise than surprized in the year 1866 at the great and rapid changes in height which took place. The column ranged from 30·40 down to 28·40 inches. This agitation of the quicksilver could not but attract the attention of even indifferent and careless observers; its warning then to those whose business it is to be much underground ought to have been striking and most impressive.

The pressure of the atmosphere per square inch is sufficiently well known, therefore to calculate that pressure right out to the foot, and to take into consideration the enormous number of square feet of fresh coal faces exposed in a large colliery, will be to see and understand what frightful calamity may follow on any great depression of the mercury. When the atmosphere is dense and heavy, the gas is kept back in a certain state of tension; but, reduction of column equal to the two inches above referred to, would withdraw so much repressive action from those very faces as would, in a very short time, and in the absence of sharp ventilation, bring about the fouling of a whole pit; the difference of an inch only might do that. Indeed, in very fiery seams, the removal of pressure indicated by the fall of only half an inch will sometimes partly account for a district of work filling up with explosive mixture; therefore, it is to be repeated, that the sinking of full two inches in the barometer would likely enough be sufficient to overpower every common provision "under ordinary circumstances" as the law now stands; and then the presence of a naked light, the clumsy handling of a safety-lamp, or the approach of a damaged one, would scatter death and destruction through every part of the colliery. Under these conditions something more should be done than a mere preparation for "ordinary circumstances."

Fire-damp previously pent up or kept back by that dense state of the air which a high column of mercury most truly represents, may well expand itself and rush out from coal faces and goaves the moment the containing power undergoes diminution. This should teach us that augmented ventilation and increased vigilance are indispensable. Old "hollows" or spaces exhausted of coal are sometimes found in localities that may well cause very serious apprehension on the part of the workpeople; in such case any indication of difference in the weight of the atmosphere will not only tell of danger from the fresh coal faces, but will give a general idea and a fair warning that something also may be going on in the goaves.

The mercury cannot be too highly appreciated, for it does not fail to let us know with precision the varying phases of the atmosphere, leaving it to ourselves to infer the consequences that may follow on any neglect of its oscillations. When these disturbances have been of a very marked and decided character, I have upon more than one occasion written to the managers of fiery mines claiming their attention to then existing meteorological conditions.

Barometrical phenomena should not be regarded with contempt or indifference. After a serious explosion the remark is often injuriously—though thoughtlessly—made, that "viewers and inspectors will be sure to refer the misfortune to the weather-glass, and "will state at the inquest that they were by no means to blame, that the mercury went "down so suddenly as to afford them no time to adopt preventitive measures, that some "reckless workmen fired the gas," and all such similar excuses. It is but human nature to endeavour to shift responsibility; still, for all that, the lessening of the pressure of the atmosphere, as exhibited and measured off on the graduated scale, is a great and undeniable fact, and one that ought never to be neglected. Viewers and inspectors may or may not have faithfully discharged their duty upon any particular event or occasion, though that is a matter altogether apart from the question; but it is neither reasonable nor fair to reflect on those officials, whether of the colliery or of the Government, for pointing out that there was an extremely low column on the day of an explosion, if such was really and truly the case. Every reference of the kind is entirely justifiable on their part, because, as far as the instrument is connected with underground pursuits, they know, or they ought to know, that it never misleads, if continuously and rightly studied and recorded.

It is not for me to say that all accidents are preventible; it would be presumption on my part to make any such statement; but, nevertheless, experience shows that some calamities might have been avoided, and the explosion in the Bedwellty pits at Tredegar on the 16th of June 1865 may be quoted in support of this opinion. A known and large accumulation of fire-damp in a cross heading was allowed to remain there for a couple of days, with a view to get it out and put things right on the following Saturday night and Sunday morning, all the colliers continuing their work in the meanwhile; but the gas fired on the Friday and killed twenty-six persons. I think those who read all the evidence that was elicited at the time will not experience very great difficulty in arriving at the conclusion that that explosion, at all events, never ought to have occurred.

Again, whilst on the subject of explosions, it may be said of those that occurred in 1866 (the year now under notice), that if I have fairly and rightly described them in the "List," it can hardly be doubted that some even of those five might have been altogether avoided.

"Fall of coal and stone"—though the second column of the "List"—is, unfortunately, but too often the first in amount of fatality. Take any period of ten years, or even five, in the annals of inspection, and it will be found that more lives are lost from this never ceasing class of accident than from explosions of fire-damp, dreadful and destructive as they always are. I have not yet been made acquainted with the number killed throughout the kingdom from all causes in 1866, and it may well be that the late frightful events have so filled the Lists as to make explosion balance falls of material in that particular year or even surpass them; but I must repeat that the selection of any five or ten years will show that "falls" leaves "explosion" far behind in the death records of the inspectors. For years past I have made particular mention of these, the heaviest of all our mining calamities.

For the most part, in my district, the colliers put up their own pit wood, and are themselves mainly responsible for their own personal safety. In the north, the deputies perform analagous duties, and, no doubt, it is better far that some of the sub-officers of the pit should be answerable for the secure and proper setting up of timber. But, whichever method may henceforth be determined on, it is still certain that even something more than that is wanting, therefore, the subject of falls of coal and stone should be reopened out and should undergo entire and deliberate reconsideration, the annual loss of life is too grave and serious to permit us to go on as we now are; some endeavour must be made to apply a remedy, or at all events to ameliorate the present condition of this column of the death list. I have before now suggested that a certain number of props should invariably be used, even in the absence of alarming appearances in the working places, on account of the treacherous nature of that structural division which more or less pervades all coal strata, and the which is locally known as "backs" in some districts and as "slips" in others; these are often concealed, and only make themselves manifest when the heavy fall has really taken place. I make mention of this conventional or stipulated mode of timbering, because as yet, as far as I know, no other method has been proposed. Under any circumstances, an alteration as regards "falls of coal and stone" is a requirement of the present time, and the sooner something is effected the better.

The general adoption of the "long wall system" may be made to conduce to safety as regards "falls," although in very extended faces coal is apt to "rate" or fly off by this method; still, that may be obviated by the manner in which the "gob" is made up at the right time, and in its suitable and proper distance from the face of work. "Long wall," again, affords facility for the extraction of all that a seam of coal or a group of ironstone courses contain; therefore, not only as far as safety is concerned, but also as regards the interests of the lord of the soil, it surpasses all operations by pillar and stall. Every ton of product should in fact be excavated; our most valuable steam and smelting fuel is met with in the lower series, and the deeper we go, the more sure and certain will be the difficulties and dangers to be encountered.

Without going further into a vexed question, I may be permitted to express my opinion, that every reason exists for not sacrificing even the smallest portion of our underground supply—great as it may appear in the eyes of the present generation; every pound weight of coal and ironstone should be brought to the surface and made available for some useful purpose or other. The extraordinary waste of coal even after it is gotten by severe labour, danger and expense, has been so often pointed out, that it is not necessary to reproduce any mention of it here; its clumsy treatment in manufacturing processes, in the generation of steam, and in domestic consumption, is beyond any description that I can possibly enter into.

We are not justified in wasteful working, or in the after lavish use of coal. It is most true that we owe a certain duty to the pursuits of our own day, but those who have to follow us in future generations should also be conscientiously thought of and considered.

Now follow "shaft accidents." It must not be said that there can be perfect immunity from danger in this class of casualty; to send people perpendicularly down hundreds of yards—even hundreds of fathoms—and to bring them up again requires very many conditions of perfection; firstly, in the shafts themselves, then in the engine, also in the strength and accuracy of the winding machinery and ropes, and in unwearying discipline, care, and attention. Nevertheless, more may be done in aid of safety to life and limb, and these measures may be very briefly enumerated: Ample steam power, so that great diameter in the drums can be permitted in order that fair play may be afforded to the very strongest of ropes, high pit framing and large pulleys, good strongly covered cages, accurate guides, with lifting wickets at the pit top, a code of signals that cannot be misunderstood, and shafts of large diameter, solidly walled from top to bottom—whether passing through the strongest rock, or the most tender and rotten shale. With respect to safety apparatus in case of breakage of rope, I see no objection to its use if it be but simple in principle, and entirely without complication in its construction; however, I must say, that I myself place great reliance on the means enumerated, that is, to say again—powerful steam engines, great diameters, strong tackle, and thickly walled shafts,—plenty of boiler room of course, large safety valves, true steam and water gauges, reliable load indicators, and very powerful and simply constructed breaks. I need not say that enginemen should be well instructed, and selected on account of full practical knowledge of their calling and their sobriety, and also that they be fairly remunerated;—the very same remarks may be properly applied to all banksmen and onsetters.

Unfortunately (as regards the year 1866), I cannot conclude my observations on shafts without again making reference to the fatal accident list; a careful perusal of that document will, I fear, clearly enough demonstrate, that of the recorded 20 accidents—some of them were preventible. I repeat, that that important part of a mine, the pit shaft, is to a certain extent invested with danger; nevertheless, several of the accidents I here refer to might, I think, have been obviated.

"Miscellaneous accidents underground" have now to be spoken of. They arise from various causes: general crush of tubs and trams, heedlessly walking up or down engine banks, self-acting inclines, and other sorts of slopes, and thus exposing themselves to be run over before they can reach the places of refuge, and so they get killed, or maimed for life;—riding in and on trams against the rules, breaking of ropes and chains on inclines, inundations of water;—explosion of gunpowder by carelessly leaving it exposed; the premature, or delayed, discharge of shots—either cause by far too common in blasting;—with also some accidents incidental to underground employment, which really cannot very well be classified.

If horse roads were maintained in good ample size, that is to say, the top blown down when necessary, and the bottom properly cut when required, and in every case always well timbered, there would not be so many hauliers killed or injured. There should also be some restriction in respect of their riding in front or at the back of the trams. The peculiarity of the cross heading system involves the necessity of wheel spragging, in doing which the hauliers frequently get hurt, and even killed; also, in sharp gradients, they place their backs against the front tram of the set to retard its too rapid descent—a very dangerous procedure indeed. Now, if the horses worked in limbers or shafts, they could, with their superior strength, do far more than a stripling of a haulier could possibly effect with his mere human muscles and bones; but in previous reports I have so often pointed it all out that I need not now enter into further details. More "double partings" also would greatly aid in simplifying the "lead" from the far-in workings to the pit bottom, and the coal should not be loaded too high; in this respect, amongst other advantages to be derived, the main roads and cross headings would afford a much freer passage for the air, it being evident that these immensely large trams piled up with coal, must terribly interfere with sound ventilation. Then again, trappers of tender age are made to go with the hauliers. These boys should be left to look after their doors (neglect of which may bring about explosion), and not travel with the trams to assist others. It is really tampering with the proper division of the labour of the pit, and, moreover, subjecting the boys to great and unnecessary danger; any one reading my "Lists" for years and years past, must see how many of these mere children have lost their lives by being withdrawn from the proper sphere of their duties, or get their limbs fractured and afterwards amputated.

In a set of drill tools for blasting purposes there are one or two (needle or pricker for example) that should be made of copper instead of steel, as, in truth, I have never ceased to point out. It is frightful the number of deaths, the loss of sight, and the blowing away of limbs, that take place in consequence of premature explosion of shots, or by delay in the due time of their discharge. Proper tools and efficient fuzes would go a long way to prevent these occurrences.

Inundations of water underground are fortunately rare, but they are dreadful when they do happen. Good maps, and never ceasing use of the bore rods, would in a great measure correct this source of destruction of life.

Notwithstanding the eighth general rule about "places of refuge," travelling on slopes may still be classed as somewhat unsafe on account of the singular indifference to danger of the workmen themselves. As to breaking of ropes and chains on inclines, they should oftener be examined, and never remain too long in use; the general wear and tear, the rubbing and friction on the floor, and the rattling and hammering over rollers, exposes all wire rope and link chain to deterioration. The molecular structure of the metal is speedily altered by all such percussive action, the iron from the state of fibre becomes crystalline, and its integrity is entirely destroyed; then the ropes or chains suddenly snap and people are killed or seriouly injured, and property is pretty nearly always sacrificed.

Once more referring to the "Lists," it may be judged whether or not many of the reported 16 deaths under the head of "Miscellaneous" might not have been avoided; my own opinion is that some of them were certainly preventible.

The last column of all, "Above-ground Accidents," will not take long to write about; fortunately, in 1866, only one of the kind had to be recorded throughout the whole year.

They are for the most part brought about by entanglement in machinery during the process of oiling, contact with trams at or near the pit top, hauliers getting knocked down by the horse or otherwise overpowered whilst tipping rubbish on the spoil banks, smash of machinery, and the bursting of boilers. As regards the latter I have never but once in the whole of this division of mines had a life lost from such cause, and that was the case of a poor friendless boy who was allowed to sleep at night on the shoulder of the brickwork of a boiler seating at a pit in Somersetshire. The absence for so many years of such calamity is certainly extraordinary, and all in the district, I am quite sure, are most thankful for such singular immunity from fatality and loss.

On the surface where there is plenty of extension and space, no roofs to fall, no firedamp, and where light abounds, I really think that "Above-ground Accidents" should cease altogether, or at any rate become exceeding rare.

"Education" is a subject that generally finishes the Inspector's Annual Report. I can only on the present occasion repeat, that for years past I have been sanguine and hopeful about its progress, and from time to time thought I could perceive a gleam of improvement amongst the younger men and boys; but I must admit that I do not think the advancement is commensurate with the liberal means and opportunities that we see established all round about us in nearly every direction.

In conclusion, it becomes my duty to state that those Acts of Parliament which have already been passed, greatly ameliorate the conditions of safety and healthfulness to the coal miner; but the recurrence at no remote periods of time of astounding catastrophe brings me more and more to the opinion, that additional measures of legislation will be of still further value and use, and that an increase and extension of inspection will be the best means of keeping within bounds those calamities that cannot have other than most startling and painful effect upon the whole and entire nation.

I have, &c.
LIONEL BROUGH.

The Right Hon. Spencer H. Walpole, M.P.,
Her Majesty's Principal Secretary of State for the Home Department,
&c. &c. &c.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS of LIFE arising therefrom, in the SOUTH-WESTERN DISTRICT, during the Year ended the 31st day o December 1866.

This District comprises a part of Glamorganshire, a portion of Breconshire, all Monmouthshire, the Forest of Dean, Gloucestershire, all Somersetshire, and a little of Devonshire.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Jan.	1	New Engine	Forest of Dean	T. F. Corbett	Henry Thomas	Collier	40	The cage came down on him as he was crossing the bottom of the pit whilst the band was in motion and severely injured his spine. The accident occurred on the 13th of March 1865, but he lingered very many months before death ended his sufferings.	–	–	1	–	–
„ 5	2	Bedwellty	Monmouthshire	Tredegar Iron Company	James Lewis	Haulier	15	He was sitting down in the main level between two pair of timbers only a yard apart, waiting for trams, when suddenly about a hundredweight of stone fell right through the settings on to his head and killed him.	–	1	–	–	–
„ 11	3	Coabrook Vale	Monmouthshire	Levick and Simpson	Josiah Fereday	Collier	36	Fall of coal in the face of his work on the 11th of January, as stated in date column, injuring him in such manner as to cause his death, which took place on the 26th of the same month.	–	1	–	–	–
„ 12	4	Old Grove	Somersetshire	Timsbury Coal Company	Alfred Brimble	Labourer	18	Being in attendance on a mason repairing a wall in the fifth vein. He unfortunately fell from an inset or brow down to the very bottom of the pit. There was at the time the protection of a large hudge placed there on purpose; but it is supposed that he was asleep, for on the mason calling for mortar he jumped up and proceeded towards the inset (the wrong direction for him altogether) and forced himself past the hudge into the shaft, down which he fell, a distance of about 22 fathoms.	–	–	1	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Jan. 29	5	Varteg - -	Monmouthshire -	Partridge & Jones - -	John Redwood -	Collier -	37	He was barring the coal down in the face of his work, but when it too suddenly fell it forced the iron bar with such violence against the abdomen as to cause death in the course of a few hours. He was a skilful, careful man, and had placed, as he supposed, a sufficient timber support to ease the coal as it fell.	–	1	–	–	–
„ 30	6	Ashton Vale -	Somersetshire -	Ashton Vale Company, Limited.	Mark Barwell -	Putter -	13	He was sending a laden tub down an "incline," but unfortunately his tugger (a small body chain) caught the containing pin, and pulled it out of the draw plate, when, of course, the tub ran wild, and entangled the boy with it down the slope, and inflicted such terrible injuries as to cause death on the 2nd of February.	–	–	–	1	–
Feb. 1	7	Paulton Engine -	Somersetshire -	William Evans & Co. -	James Gregory -	Collier -	21	Heavy fall of roof from overhead whilst he was engaged in getting the coal; he died the day after the accident.	–	1	–	–	–
„ 6	8	Ashton Vale -	Somersetshire -	Ashton Vale Company, Limited.	John Pedder -	Tub filler -	16	Killed by the fall of a mass of coal; a prop was jammed against it on account of its threatening appearance until it could be safely got down by the proper collier. It must be borne in mind that the deceased had no business whatever within the range of its fall.	–	1	–	–	–
„ 9	9	Bargoed Level -	Glamorganshire	Bargoed Company, Limited	John Thomas -	Collier -	13	Over the coal is a "clod," the fall of which killed him on the spot.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Feb. 14	10	Bargoed Level -	Glamorganshire	Bargoed Company, Limited	Thomas Morris -	Collier -	55	By superincumbent pressure a piece of coal flew out and struck him on the breast, but, as far as could be judged, not with extreme violence; in fact there was not a mark on his person, but he was supposed to be afflicted with heart disease. Death was instantaneous.	–	1	–	–	–
„ 17	11	Rhymney -	Monmouthshire -	Rhymney Iron Company -	Lewis Morgan -	Collier -	14	Killed in the Mardy pit by a fall. The vein is in two "lifts," and just where he worked the bottom coal had been excavated, and another man (David Price) was setting up a prop to the top lift when the coal fell with great violence bruising him considerably; but, unfortunately, killing Lewis Morgan on the spot.	–	1	–	–	–
„ 19	12	Radstock - -	Somersetshire -	Countess of Waldegrave -	Azariah Pratten -	Collier -	34	Killed by a fall of stone whilst at work in the Ludlows pit. He had tried hard to get the stone down, but it would not come. He then went under it to get some still further in coal loosened by a shot, which he effected, when, after a short space of time, the stone itself fell having become unlocked by the removal of the coal. He should have persisted in getting the stone to fall, or have set up a couple of props, before he ventured to bar down the coal beyond it.	–	1	–	–	–
„ 23	13	Beaufort -	Monmouthshire	J. and C. Bailey - -	William Williams -	Collier -	40	Fall of "rashings" in the Elled vein in the Bwlch-y-garn pit. These "rashings" are useless interlaminations of coal and shale between the good coal and the true top.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Mar. 3	14	Ebbw Vale -	Monmouthshire	Ebbw Vale Co., Limited -	David Davis -	Haulier -	18	Something fell down the No. 15 pit. He was at the time at the bottom getting his horse (just descended) out of the cage when the substance, whatever it was, struck him on the head and killed him.	–	–	1	–	–
„ 9	15	Tredegar - -	Monmouthshire	Tredegar Iron Company -	Richard Clayton -	Collier -	42	Killed by fall of coal and rubbish in the No. 8 pit. The haulier had gone into the stall, but not seeing Clayton there he returned. Another man went into the working place to talk to him, but could not find him, so he also went away; neither of these persons reported the fact of a heavy fall. Finally his death was discovered about 9 o'clock at night, so according to my calculations he must have been buried there ten hours and a half. This shows clearly that more deputies should be employed in such manner that no working place should remain hours and hours without inspection.	–	1	–	–	–
„ 12	16	Tredegar - -	Monmouthshire	Tredegar Iron Company -	Thomas Hughes -	Collier -	51	A piece of stone fell on the day named in the Globe pit, but with apparent very slight injury; nevertheless he died on the 5th of April. The surgeon of the works certified "that he died " from disease of the chest, but that " probably death was accelerated by " the accident." Under these circumstances I am necessitated to include it in the list.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Mar. 20	17	Kingswood	Gloucestershire	Kingswood Company, Limited	George Williams	Putter	13	Fall of stone in the deep pit. Two other boys were with him, and whilst the men were getting something to eat, the three children went in by, where they had not the least business whatever, and went to sleep, and were only aroused by the fall that killed their companion.	–	1	–	–	–
April 4	18	Trafalgar	Forest of Dean	Cornelius Brain	James Reece	Hanger on	37	Killed by the cage. It is the downcast shaft—of small diameter—and the intake air was at the time so sharp that Reece had to slip his candle into a recess in order to keep light; in doing so, his foot slipped, and he was caught by the quickly descending cage.	–	–	1	–	–
,, 6	19	Cwmsychan	Monmouthshire	Ebbw Vale Company, Limited	Henry Colcomb	Archer	33	In coming up the pit he fell out of the cage, and was killed.	–	–	1	–	–
,, 24	20	Vobster	Somersetshire	Vobster and Mells Company	William Wyse	Collier	42	Killed by falling down a "cut" or staple. My own opinion is, that after having partaken of food (it was in the night time) he went to sleep close to the "cut," and the putters coming suddenly in, he awoke in alarm, and went right into it.	–	–	1	–	–
,, 25	21	Pontypool	Monmouthshire	Ebbw Vale Company, Limited	George Reynolds	Collier	19	This young man had been just taken on, and, as far as I can make out, had never struck a stroke of work there; however, that day he went down to begin in the rock vein workings of the Glyn pits, and had sat down to eat his victuals preparatory to commencing operations, when about a ton of stone fell, and killed him in a moment.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. April 26	22	Cwmbran - -	Monmouthshire -	John Lawrence - -	Isaac Maynard - Robert Allen - - John Morgan -	Mason - Stoker - Haulier -	39 23 22	These men were killed by an extraordinary accident :— There is a steam engine underground for the "deep workings," and the water for generating steam is so very bad that they frequently have to blow right through, and for this purpose there is a large cock, but it was unavoidably close to the main horse road. The haulier came in about half-past two in the morning, but, unfortunately, either his horse ran away, or he drove him unnecessarily fast, for on arriving near the boilers, the trams flew off the plates, and knocked down the upright pipe to which the cock was attached, and the escape of the steam became so rapid and fierce, that not one of the three men escaped, the haulier himself being one of the sufferers. I have since had doubled cocks established, so that there is but little possibility of any repetition of so terrible a catastrophe, because the cocks will be like double doors underground—when either is opened, there is still a closed one.	–	–	–	3	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof and Coal.	In shafts.	Miscellaneous.	Above ground.
1866. May 2	23	Pontypool -	Monmouthshire -	Ebbw Vale Co., Limited -	Lewis Harris -	Roadman -	23	At the time of his death he was temporarily employed as a haulier, and, descending a stiff gradient, he was "shafting" the tram, that is, retarding it as much as possible. He was coming out of a stall into a cross heading, and of course doing all he could with his back against the front of the tram to arrest its too rapid descent ; but it overpowered all his strength and killed him. I have often stated in my annual reports, that with the cross heading system of Wales, the horses should be provided with shafts, which would save many a human life.	–	–	–	1	–
,, 9	24	Bedwellty -	Monmouthshire -	Tredegar Iron Company -	George Thomas -	Collier -	25	Cause of death explosion of fire-damp. George Thomas was one of three persons driving on a level at night. Just before three o'clock in the morning they had partaken of the food they had brought down the pit with them, and this meal it appears had occupied some considerable time. They then returned towards their work, one of them going before the others with a naked light (how rare it is that even experience teaches caution) which he held in the same hand as the victuals bag, and in hanging that up near the top of the brattice, his hand carrying the candle as well as the bag, an immediate explosion took place. Some statements were made at the inquest about the men having gone to	1	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1865.								sleep after their food, and that a piece of coal had flown out by superincumbent pressure and knocked a board clean out of the brattice. This was not at all an appropriate suggestion, inasmuch as that the face of the level was actually 15 yards *beyond the brattice.* That fact alone is quite sufficient to account for the explosion. None of the three men were burned in the least, but the deceased George Thomas ran the wrong side of the brattice and was afterwards picked up without a singe or a mark on his person, of course he was suffocated by the after-damp, there is no doubt in the world about that. The other two men escaped without injury. The pit does not at present want for air; but if that air is not carried to the faces the cost of its production is thrown away and peoples' lives will be always in danger.					
May 11	25	Rhymney	Monmouthshire	Rhymney Iron Company	Daniel Thomas	Roadman	61	Killed by falling under trams on the incline. He had many times been told to retire into the places of refuge when he heard the machine at work, but on this occasion he appears to have disregarded the warning.	–	–	–	1	–
,, 12	26	Mells	Somersetshire	Vobster and Mells Co.	John Hamblin	Collier	20	Killed by the fall of about a hundredweight and a half of the stuff that lies immediately on the top of the coal.	–	1	–	–	–
,, 12	27	Bedwellty	Monmouthshire	Tredegar Iron Company	John John	Haulier	12	Fell under trams and received such injuries as to quickly bring about his death.	–	–	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866.													
May 18	28	Cwm Tylery -	Monmouthshire	South Wales Co., Limited	John Bagnal - Emmanuel Bagnal	Collier - Collier -	55 20	A canvas sheet or door turned the air into its channel; but it was, in my opinion, miserably imperfect in its kind; consequently a certain amount of gas accumulated, and this fired at the younger Bagnal's naked light. The father died on the 24th of the injuries occasioned by the explosion of the 18th, and the son succumbed on the 1st of June. There ought to have been two sound well made wooden doors up (commonly called frame doors) to direct the air into its proper course; to say the least of it, it was indiscreet to trust a whole split of air to a mere rag, with careless drivers and others passing to and fro, none of whom, probably, entertained responsibility in their own minds, and were most likely, stolidly indifferent as to whether gas gathered together or not.	2	–	–	–	–
„ 30	29	Bedminster, South Liberty.	Somersetshire -	Ashton Vale Co., Limited	John Thompson - Joseph Crane -	Sinker - Sinker -	21 44	These men were walling a sinking pit when the end of one of the scaffold supports (bars so called down here) slipped out, the "half moon" tipped on one side, and two men fell to the bottom. They had attached a rope to a heavily loaded square bucket then on the scaffold, and permitted the engine to upset it, so as to save a little of their own manual labour in unloading the bricks, and the shock of this turning over caused the bar to slip out. Thompson was killed on the spot, Crane lingered in hospital until the 19th of October (nearly five months), and a third man escaped by springing on to the top of the bricking.	–	–	2	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In shafts.	Miscellaneou	Above ground.
1866. June 2	30	Abercarn	Monmouthshire	Ebbw Vale Co., Limited	William Gimlett	Collier	54	Killed by fall of coal whilst wedging it down. It flew out of the face of his stall in consequence of double slips or backs.	–	1	–	–	–
„ 6	31	Ebbw Vale	Monmouthshire	Ebbw Vale Co., Limited	William Evans	Collier	62	Fall of "clod" and top coal in the "old coal." He had worked for 45 years in the same seam.	–	1	–	–	–
„ 15	32	Mells	Somersetshire	Vobster and Mells Co.	John James	Miner	45	Blasting in a hard heading, the reed ignited, but the shot did not go off. He, as is too often the case, went back too soon to see what was wrong, but fire was still lingering in the hole and away went the charge. He was so dreadfully injured that he died on the 17th.	–	–	–	1	–
„ 15	33	Ebbw Vale	Monmouthshire	Ebbw Vale Co., Limited	David Jones	Collier	13	Working in a stall with his father he was suddenly killed by fall of a small piece of "clod" in the "three quarter" coal workings.	–	1	–	–	–
„ 20	34	Newbury	Somersetshire	Westbury Iron Company, Limited	George Steedes William Moore	Miner Miner	30 36	Lost their lives by sudden rush of broken stones and rubbish in one of a pair of close together pits which they were employed to clear out.—*Note.* All that relates to this accident will be found described in the body of the report.	–	–	2	–	–
„ „	35	Old Welton	Somersetshire	Savage, Parsons, and Co.	James Norman	Pumpman	30	The guides in the pit are so arranged that those who have to attend to the pumps cannot possibly emerge from the inside of the cage, and so enter the drift, but are bound to travel on the top (amongst the bridle chains) in order to command every side of the shaft. In this manner, whilst Norman was without bonnet or protection overhead, a stone actually fell out of a loaded tub on the very surface, and so injured his head that he died within an hour. Taking it altogether, I never in my life met with a more bungling affair.	–	–	1	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. June 20	36	Tredegar	Monmouthshire	Tredegar Iron Co.	David Jones	Collier	34	Burned by explosion of fire-damp in the No. 8 pit on the 20th and died on the 21st. He went a long way past a danger signal to get a plate. If people will pass those signals, punishment in some shape or other is sure to ensue, it is inevitable.	1	–	–	–	–
„ 21	37	Tredegar	Monmouthshire	Tredegar Iron Co.	Lewis Hughes	Collier	13	Working in the Globe pit with a man named Henry Bowen in a windway not more than four feet square, a stone fell on Bowen from the top, and slid off him on to the poor boy, who was so injured that he died on the 27th. It was that class of roof stone called a "bell mould" that fell.	–	1	–	–	–
July 2	38	Lodge	Gloucestershire	E. & J. Monks	I. Lovel	Collier	19	Killed by fall of stone in the heading	–	1	–	–	–
„ 2	39	Bull Hall	Gloucestershire	Jeffrys, Sanders, & Co.	Isaac Brain	Hanger-on	30	Lost his life in the inset, in consequence of being forcibly and violently crushed by the ascending cart against the "gug" pulley. Altogether a most rude arrangement at pit bottom.	–	–	1	–	–
„ 7	40	Ebbw Vale	Monmouthshire	Ebbw Vale Co., Limited	John McCarthy	Haulier	25	Crush of trams on the 7th, died on the 8th.	–	–	–	1	–
„ 9	41	Edford	Somersetshire	Waters, Brice, & Co.	Isaac Witcombe	Collier	29	Killed by heavy fall of stone	–	1	–	–	–
„ 10	42	Brookhall Ditches	Forest of Dean	John Trotter	Charles Vurgham	Collier	30	Fell down the pit and was killed	–	–	1	–	–
„ 11	43	Place Level	Monmouthshire	C. Protheroe	Evan Williams	Collier	20	Lost his life by fall of coal	–	1	–	–	–
„ 12	44	Cwm Tylery	Monmouthshire	South Wales Co., Limited	John Kirkham	Sinker	45	Being at the bottom and about to fasten a tram to the chain, he was suddenly struck on the head and killed by a piece of stone which fell from the side of the pit.	–	–	1	–	–

List of Fatal Colliery Accidents—*continued*.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	No. of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. July 14	45	Tredegar	Monmouthshire	Tredegar Iron Co. -	George Giles -	Collier -	61	Drawing back the coal in the "yard vein," some of it fell, and though with apparent slight injury, he nevertheless died in consequence thereof on the 24th of same month.	–	1	–	–	–
" 19	46	Tyr Phil -	Glamorganshire	Rhymney Iron Co. -	Charles Jenkins -	Collier -	15	Fall of "bell mould" from roof lying over the Brithdir vein of coal. Killed in a moment.	–	1	–	–	–
" 24	47	Blaenavon -	Monmouthshire	Blaenavon Iron Co. -	William Austin -	Collier -	32	Killed in the Garn "Slope working" by fall of stone from roof.	–	1	–	–	–
" 26	48	New Rock -	Somersetshire -	Plummer & Co. - -	Jacob Padfield -	Collier -	17	Stepped out of the cage whilst it was still descending.	–	–	1	–	–
" 26	49	Bedwellty -	Monmouthshire	Tredegar Iron Co. -	Thomas Down -	Collier -	26	Hurt by fall of coal, and in consequence thereof he died on the 29th. He was drawing his pillar back, and was in the act of pulling down some top coal, when it too suddenly fell, and severely injured his spine.	–	1	–	–	–
Aug. 11	50	Cwmbran -	Monmouthshire	John Lawrence - -	Frederick Cook -	Haulier -	13	Fell under trams (as far as it is known) on one of the surface roads, and was found dead.	–	–	–	–	1
" 11	51	New Tredegar	Monmouthshire	George Elliott & Co. -	John Samuel -	Haulier -	13	A horse ran away with him underground, and the empty tram crushed him against the side of the level and killed him.	–	–	–	1	–
" 15	52	Bedwellty -	Monmouthshire	Tredegar Iron Co. -	James Warren -	Collier -	61	Fall of stone whereby he was so greviously hurt that he barely lived an hour.	–	1	–	–	–
Sep. 4	53	Timsbury -	Somersetshire -	Timsbury Coal Co. -	William Cowherd -	Carting-boy	14	By pressure a piece of coal burst off from the face of "long work" in the Sliving vein in the Upper Conygre pit, and killed him. If the gob had been closer up, it would have received much of the heavy pressure, and the coal would not have flown off like a cannon ball.	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosion.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Sept. 5	54	Abercarn - -	Monmouthshire	Ebbw Vale Co., Limited -	John Carter - -	Haulier -	13	Killed by crush of trams - - -	–	–	–	1	–
„ 7	55	New Tredegar -	Monmouthshire	George Elliott & Co. -	Isaac Jones - -	Door boy -	13	Full trams passed over him and crushed him to death.	–	–	–	1	–
„ „	56	Risca - -	Monmouthshire	T. W. Rhodes - -	John Morris - Aaron Short -	Collier - Collier -	29 17	The Black Vein pit is worked by a very long engine bank, and there is, as regards this slope, a special rule against riding in the trams, but at times this law is knowingly disobeyed; the present case is an example, and two lives were sacrificed by it. Unfortunately, the trams flew off the metals, and the poor fellows were crushed to death under them. A new pit to the deep would be a capital remedy for this source of danger, and for many others in that colliery.	–	–	–	2	–
„ 22	57	Pontypool -	Monmouthshire	Ebbw Vale Co., Limited -	John Whitney -	Roadman -	45	He was occupied with two others in cutting bottom in the level, just opposite the mouth of a stall in the rock vein of coal in the Glyn pits; in doing this they disturbed some supporting timber, and the result was a sudden and heavy fall of rubbish, which killed Whitney almost instantaneously.	–	1	–	–	–
„ 26	58	Grayfield - -	Somersetshire -	Mogg & Co. - - -	Mark Cleaves -	Collier -	35	Descending the shaft he fell out of the cage and was killed; actual fall 220 yards perpendicular. An upcast pit of exceedingly high temperature, full of hot smoke and steam. My opinion is that Cleaves was overpowered by it. The entire depth through this class of atmosphere is 300 yards, and I am bound to say it had a serious effect on my own health in only once going down and coming up again.	–	–	1	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Oct. 1	59	Flour Mill -	Forest of Dean -	Flour Mill Co., Limited -	John Hooper -	Sinker -	25	Went down about midnight to loosen the bolts of the clack door, and, as is to be supposed, fell off the "half-moon" into the sump below, and was drowned before help could reach him. He ought to have been accompanied by another person; a man cannot safely use the spanner with one hand and light himself with the other in such a place as that, where he has to hold on in a dark wet pit as best he can. He should have taken an assistant down with him.	–	–	1	–	–
„ 9	60	New Bowson -	Forest of Dean -	Great Western Deep Coal Co., Limited.	Henry Griffiths -	Sinker -	29	Whilst sinking, with others, in the bottom of the deep pit, a piece of stone fell from a great height (flew off by superincumbent pressure), and so severely injured his head that he died that same night. The pit was put down through extensive old workings, and was not by any manner of means so well cased as I could have wished it.	–	–	1	–	–
„ 29	61	Ebbw Vale -	Monmouthshire	Ebbw Vale Co., Limited -	William Roach -	Collier -	34	Burned by explosion of fire-damp in the Vydylog vein on the 29th of October, and died of the injury on the 7th of November. The working place was not examined early in the morning, according to rule, consequently the coroner's jury returned a verdict of manslaughter against the deputy.	1	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866.													
Oct. 30	62	Tyr Phil	Glamorganshire	Rhymney Iron Company	Daniel Davis	Collier	32	Hurt in the back by fall of a thin piece of shale; died of the injury on the 4th of November.	–	1	–	–	–
Nov. 14	63	Blaenavon	Monmouthshire	Blaenavon Iron Company	Thomas Williams	Fireman	38	Died in the discharge of his duty whilst examining the working places before the men went in in the morning. Cause of death—fall of roof, which suddenly caught him in the Garn Slope workings, and he was found dead.	–	1	–	–	–
„ 14	64	New Tredegar	Monmouthshire	George Elliott & Co.	Edwin Morgan	Trapper	12	Killed by fall of stone and rubbish whilst going round with the haulier; a process I have always much objected to as regards these door boys.	–	1	–	–	–
„ 17	65	Stapledge	Forest of Dean	J. H. Warman	James Jenkins	Collier	30	Fall of coal in the Coleford High Delf	–	1	–	–	–
„ 22	66	Rhymney	Monmouthshire	Rhymney Iron Company	David Williams	Gobber	25	Fall of shale whilst preparing timber to set up under the very part that fell.	–	1	–	–	–
„ 22	67	Beaufort	Monmouthshire	J. & C. Bailey	James Hayes	Collier	30	He was acting that day as haulier in the Bwlch-y-garn pit, and coming out with his "set," he stood on the coupling-hook to trim his light, forgetting that he was approaching some arching that was rather lower than other parts of the roadway; the result was that the arching caught his head and injured him so that he died on the following morning.	–	–	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death and remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Nov. 26	68	New Tredegar -	Monmouthshire	George Elliott and Co. -	Samuel Edwards -	Windroad man.	36	A fall had taken place, and this man with another were set to work to clear all obstacles to safety; but they appear not to have managed the job in the right way, for one of their locked lamps went out, and whether they were relighting it (against rules) or not did not transpire, however, some gas fired, and Edwards died of suffocation by the after damp; there was not a bruise or a burn on any part of his person. I found one of the lamps good, but the other most unsafe; but whether from the shock of the explosion or not, I was unable to ascertain. My own opinion is, that they were relighting a lamp, without giving themselves the trouble to go back to the station.	1	–	–	–	–
" 27	69	Bedwellty -	Ditto - -	Tredegar Iron Company -	Edward Williams -	Door boy -	14	He was one of those trappers who have to accompany the hauliers, and with the wandering habits so acquired, he heedlessly and against all custom crossed the bottom, when the band was in motion, and the cage came down on him, and crushed him to death.	–	–	1	–	–
Dec. 3	70	Tredegar - -	Ditto - -	Ditto - - -	Joseph Ware -	Collier -	45	He was coming up the "drift" when the slope chain broke, and the trams overwhelmed him before he could find shelter, and inflicted such dreadful injuries that he died an hour afterwards.	–	–	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
Dec. 12	71	Tredegar -	Monmouthshire	Tredegar Iron Company -	Thomas Lewis -	Collier -	46	Heavy fall of coal in No. 8. I am sorry to have to record that this pit has for years been unfortunate as regards shocking accidents. Indeed, I may say, that the Tredegar Works have been the scene of many serious calamities.	–	1	–	–	–
" "	72	Risca - -	Monmouthshire	T. W. Rhodes - -	John Watkins -	Collier -	30	Killed by fall of coal from a "face slip"	–	1	–	–	–
" 15	73	Pontypool -	Monmouthshire	Ebbw Vale Company, Limited.	Joel Treasure -	Collier -	58	Fall of roof in the "New Vein working"	–	1	–	–	–
" 28	74	Gwrhay - -	Monmouthshire	Roger Lewis - - -	Phillip Williams -	Collier -	45	Killed by fall of rubbish in the Waterloo colliery.	–	1	–	–	–
" "	75	New Engine -	Forest of Dean	T. F. Corbett - - -	James Price - -	Door boy -	13	He had finished his shift of work, and, unfortunately, he had to cross the bottom of the shaft in order to get into the cage; but, owing to the late heavy falls of rain and melting of snow, the winding tank could barely keep the water under, and the scaffold was consequently off the sump, so the poor boy walked right into it and was drowned. The hanger on was decidedly blameable in this matter.	–	–	1	–	–
								Total - - - - -	6	38	20	16	1

List of Fatal Colliery Accidents—*continued.*

RECAPITULATION.

Total number of separate accidents reported in the year 1866 - - -	75
Total number of persons killed by those 75 separate accidents - - -	81

Whereof	6	deaths	were occasioned by explosion of fire-damp.
„	38	„	„ falls of coal and stone.
„	20	„	took place in pit shafts.
„	16	„	arose from miscellaneous causes underground.
„	1	„	occurred on the surface.
Total -	81	deaths,	as enumerated and described in the List.

COMPARATIVE TABLE OF THE LAST FOUR YEARS.

In 1863,	3	persons lost their lives by explosion of fire-damp; whilst, during the whole of the year, the total number of deaths from all causes amounted to -	60
„ 1864,	6	„ „ „ „ „	67
„ 1865,	26	„ „ „ „ „	82
„ 1866,	6	„ „ „ „ „	81

It will thus be seen that during the last four years no improvement as regards the number of persons killed can in any shape be reported in my district.

LIONEL BROUGH,
Inspector of the Coal Mines of the South-western
Division of the Kingdom.

LIST OF THE NON-FATAL ACCIDENTS IN COAL MINES DURING THE ENTIRE YEAR OF 1866.

Of these there occurred 109 in all, attended with injury more or less to the parties employed, in manner as tabulated below :—

15	accidents by fire-damp,	whereby	20	men and boys were burned by explosion, or contused, fractured, and otherwise injured by its expansive power and action.
57	„ by falls of coal and stone,	„	61	men and boys suffered from broken bones, or in various other ways were wounded or hurt.
5	„ in shafts,	„	5	men and boys underwent fracture, or received some description of injury.
25	„ from miscellaneous causes,	„	30	men and boys had bones broken, or suffered from injuries—some of them of an equally grave and serious character.
7	„ occurred on surface,	„	7	men and boys were maimed or hurt in some manner or other.
109	accidents altogether,	„	123	persons received more or less injury, and underwent more or less of consequent suffering.

A great number of these 123 persons have since been restored in bodily health, or are now progressing towards recovery; but, it must be observed, that should fatal results at any time ensue, the death will be recorded in the year in which it takes place, or in the next Annual Report. As an example, the very first death recorded in the Schedule of 1866 (Henry Thomas, injured in the New Engine pit,) is now referred to, and I mention the circumstance here in order to show that loss of life cannot very well escape the Inspector's lists.

LIONEL BROUGH,
Inspector of Coal Mines as aforesaid.

LIST of the FATAL ACCIDENTS in IRONSTONE MINES, and LOSS of LIFE arising therefrom, in the SOUTH-WESTERN DISTRICT of GREAT BRITAIN, during the Year ended the 31st Day of December 1867.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.				
									Explosions.	Fall of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. Jan. 5	1	Blaenavon	Monmouthshire	Blaenavon Iron Company	Benjamin Treasure	Miner	28	Hurt by a fall of stuff on the 22nd of December 1865, died on the 5th of January 1866.	–	1	–	–	–
„ 16	2	Sirhowy	Monmouthshire	Ebbw Vale Co., Limited	Henry Osmund	Miner	17	Killed in No. 8 Pit by sudden rush of ground from face of working place in consequence of a concealed slip.	–	1	–	–	–
„ 19	3	Beaufort	Breconshire	J. and C. Bailey	William Brookman	Miner	35	Instantaneously killed by sudden fall of mine-ground, just after knocking out props.	–	1	–	–	–
Mar. 28	4	Sirhowy	Monmouthshire	Ebbw Vale Co., Limited	Roger Gwylim	Miner	28	In No. 7 Pit a fall of ground lying between two known slips at right angles to each other, the apex pointing upwards; another slip or joint, previously unseen, crossed those horizontally, and it was the truncated mass beneath that fell and killed Gwylim.	–	1	–	–	–
Apl. 13	5	Ebbw Vale	Monmouthshire	Ebbw Vale Co., Limited	Thomas Williams	Miner	27	Killed by fall of stone from roof in the "Spotted Vein."	–	1	–	–	–
May 1	6	Blaenavon	Monmouthshire	Blaenavon Iron Company	George Thornhill	Miner	42	Fall of working ground in the Hill Pit, forcing out the timber.	–	1	–	–	–
„ 3	7	Pontypool	Monmouthshire	Ebbw Vale Co., Limited	Robert Long	Miner	50	Hurt by fall of mine-ground in the "Spotted Vein" in the balance pit. He died of the injuries on the 6th of May.	–	1	–	–	–
June 16	8	Ebbw Vale	Monmouthshire	Ebbw Vale Co., Limited	Edward Parsons	Miner	40	Injured in the Red Vein working in the "Gantre," by fall of stone, on the 16th and died on the 18th, after undergoing *two* amputations.	–	1	–	–	–
„ 20	9	Nantyglo	Breconshire	J. and C. Bailey	Anne Davis	- - -	27	Killed by a fall under ground	–	1	–	–	–

List of Fatal Ironstone Mine Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.				
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.
1866. July 2	10	Sirhowy	Monmouthshire	Ebbw Vale Co., Limited	John Evans	Miner	13	Hurt by fall of roof in the Red Vein workings, and died of his injuries later on in the day.	–	1	–	–	–
„ 14	11	Golynos	Monmouthshire	William Richards	William Silcox	Miner	18	Killed by fall of roof	–	1	–	–	–
Aug. 14	12	Victoria	Monmouthshire	Ebbw Vale Co., Limited	George Tiley	Miner	36	A bottom plate of the trams broke and some of them ran wild down the plane and caught him as he was going up, whereby he was so injured that he died on the 15th.	–	–	–	1	–
Dec. 14	13	Tredegar	Monmouthshire	Tredegar Iron Company	John Evans	Miner	17	Went down the Globe Pit with six others, who got out in the dark, knowing the shaft bottom, but he was unacquainted with it and lingered in the cage, which began to ascend, and then he jumped out and was killed. The banksman was to blame for going on (Water Balance Pit) without a signal, and the hitcher was equally without excuse for not being present on the spot with a light, to receive the people.	–	–	1	–	–
„ 31	14	Pontypool	Monmouthshire	Ebbw Vale Co., Limited	John Williams	Miner	39	Killed in the Glyn Pits by fall of ground whilst holing.	–	1	–	–	–
								Total deaths	–	12	1	1	–

List of Fatal Ironstone Mine Accidents—*continued.*

RECAPITULATION.

Total number of separate accidents reported in the year 1866 - - - - 14
Total number of persons killed by those 14 separate accidents - - - 14

Whereof 12 deaths were occasioned by falls of roof, rubbish, and mine ground.
,, 1 ,, occurred by an accident in a pit shaft.
,, 1 ,, arose from miscellaneous causes underground.

Total - 14 deaths, as recorded in the above Fatal Accident List.

Comparative View of the last Four Years.

In 1863, the total number killed in all the Ironstone Mines of the district, and arising from every cause, amounted to - - - - - - 19
,, 1864, ,, ,, ,, ,, ,, ,, 17
,, 1865, ,, ,, ,, ,, ,, ,, 14
,, 1866, ,, ,, ,, ,, ,, ,, 14

So that improvement is visible, especially as the "get" or produce of the Mines is on the increase.

List of the Non-fatal Accidents in Ironstone Mines during the whole of the Year 1866.

3 accidents were occasioned by fire-damp, whereby 4 persons were more or less injured, and for the time disabled.
11 ,, ,, by falls of material, ,, 11 ,, ,,
4 ,, ,, by miscellaneous causes, ,, 5 ,, ,,

18 accidents reported, whereby 20 persons were injured.

These, I am happy to state, are at work again, or are progressing towards convalescence.

Lionel Brough,
Inspector of Ironstone Mines in the South-Western District.

Mr. Baker's Report.

Report on the Inspection of Mines in the South Staffordshire and Worcestershire Division for the Year ended the 31st December 1866.—By James Philip Baker, Esq.

Sir, Wolverhampton, 28th February, 1867.

The Report which I have the honour to lay before you for the year 1866, is not so favourable as the one which immediately preceded it.

The number of lives lost in the year 1865 was 91, but during the year 1866 one hundred and nine (109) lives have been sacrificed in and about the coal mines of this district, which is however below the annual average of the previous five years. And on the first page of my last annual report it will also be observed that this number shows a large diminution in the death rate amongst the miners and other workmen employed at the collieries of this inspection division. Besides those killed, there has been, as usual, a large number injured, all of whom, for anything that I know to the contrary, have resumed work, or they are recovering their wonted health.

Of the 109 fatalities, 14 are due to explosions of fire-damp, 52 to falls in the mines, 25 to accidents in shafts, 16 to miscellaneous accidents underground, and 2 to accidents on the surface; 45 of these were in my opinion, preventible, namely, 8 by explosion, 13 by falls, 10 in shafts, 13 miscellaneous, and 1 on the surface, amounting to about 40 per cent. of the number killed throughout the year, and which do not in truth belong to those of an *accidental* character; and I should not be doing justice to the subject if I omitted to state what, in my judgment, has brought about this waste of human life; therefore I do not hesitate to say that, in the first place, it is to some extent due to the neglect of *owners* and *agents* to comply with the provisions of the law, and their unwillingness to adopt certain precautionary measures, which in some cases would render an accident almost if not quite impossible. Secondly, it is due to the non-observance of the special rules by the *charter masters*, and other persons employed; and lastly, to indifference to danger, and disregard of the colliery regulations on the part of many of the unfortunate persons themselves. But as I shall have to allude to some of these aacidents again, further comment is now unnecessary.

Convictions for violations of the provisions of the law, and of the special rules thereunder.

During the last six years, penalties have been imposed on the owners, agents, charter masters, and workmen of the collieries in this district, amounting to about 568*l.*, and I am sorry to have to state that I still find, in one way or another, the provisions of the law and colliery regulations violated; but whether such conduct is due to ignorance of the law on the part of some, or indifference to its importance on the part of others, or, what is by no means improbable, the smallness of the penalties imposed in some cases, it is rather difficult to determine. The amount annually imposed in this district probably equals, if not exceeds, one-half of the amount of the penalties imposed in all the other inspection districts put together, which after all does not appear to insure due obedience to the law. The only remedy which suggests itself to me, would be to considerably augment the amount of the penalties generally, and fix a heavy minimum in all cases. Nothing in my opinion would more tend to bring about a due observance of the law and the colliery regulations, upon which the lives and limbs of the miners so much depend. During the year 1866 I have, upon your authority, instituted proceedings against colliery owners, agents, charter masters, and workmen, and the penalties imposed amount to 77*l.* 2*s.* 0*d.*

There are about 544 collieries in this inspection district, a considerable number of which are not in operation, and many of them partially or nearly exhausted. Within the boundaries of these collieries there are thousands of pit-shafts of various depths, varying from a pair of shafts to upwards of 70 in a colliery.

The amount of coal raised during the year (including the colliers' allowance coal, colliery consumption, and waste, which is estimated at about 1,350,000 tons) amounts in the aggregate to 10,300,000 statute tons of 2,240 lbs., thus showing a slight increase when compared with the quantity wrought during the year 1865.

Explosions of fire-damp.

The loss of 14 lives through explosions of fire-damp in a district regarded as non-fiery is very unsatisfactory; and unless stricter discipline be enforced underground, notwithstanding the comparative freeness of the mines from eliminations of this gas, the death list will be annually augmented thereby. Having already alluded to the loss of life under this head, I will now endeavour more fully to describe those cases which appear to me to require special remark, namely, Nos. 20, 53, 55, 57, 85, and 89.

No 20 occurred at the Ocker Hill Colliery, belonging to Mr. Job Haines, on the 23rd of March. On the morning in question the charter master's deputy found gas in the goaves or wastes in the workings of the roof coal, in consequence of which the miners employed there were not allowed to enter. Operations were commenced in other parts of the mine in the main coal, and a few of the men were employed in the navvy or middle side of work, through which the current of air passed from the upper workings, the deputy at the same time keeping as he stated, "strict watch over the gas," which was known to exist in the goaves between him and the lower workings.

Early on the day in question a sudden fall of roof took place in the roof-coal goaves, immediately after which an explosion ensued, burning several of the miners severely, two of whom however lingered several days and then expired. Nobody in the pit could give any account as to how the explosion occurred, but the inference was, that the fall of roof displaced the gas and forced it out of the goaves upon one of the workmen's candles, which is by no means improbable. The fall may however have driven the gas out of the upper workings into the lower, or it may have been carried undiluted in the same direction by a feeble current of air, and fired at one of the workmen's candles in that part of the mine, which, judging from the quantity of air circulating through that part of the pit a day or two after the explosion, is not at all unlikely. I was however unable to discover any gas, either in the workings or the goaves.

Allowing men to work in close proximity to goaves containing accumulations of fire-damp, or permitting them to work in currents of air containing or likely to contain inflammable gas with naked lights, is what no man in his senses and who understands his business would ever think of doing. Nevertheless, I regret to have to state that this is one of the many cases which have occurred in this district through the ignorance and incompetency of some of the persons intrusted with the care and management of underground operations, and to which the charter-master system, as a whole, has also largely contributed. In the absence of the manager, the persons in charge of the mines are, generally speaking, selected and appointed by the charter-masters, which offers insuperable obstacles to all improvement.

On the 18th of June last, two persons lost their lives by an explosion of fire-damp in one of the thick coal pits of the Woodside Colliery, belonging to Messrs. Cochrane, No. 53 in the list. On the morning of the explosion several men and boys were engaged to *thirl* an air-head which had been driven some distance parallel with, and about 10 feet from the side of a gate-road. The pit had been worked with naked lights up to the day of the explosion, but owing to the discovery of the presence of gas, and the long distance the two deceased persons were employed beyond the circulation of the air, the charter-master's deputy (William Lowe) ordered James Pyatt, one of the deceased persons, to use a safety-lamp which was not provided with a lock, and the result was that Pyatt screwed the gauze off his lamp, and exposed the flame, which ignited the surrounding inflammable atmosphere, severely burning Pyatt himself, and D. Raybould a boy then at work with him. The former died of the injuries two days after, but the boy lingered till the 20th of July, when he also died.

The 3rd general rule of the Mines Regulation and Inspection Act of 1860, enjoins that "whenever safety-lamps are required to be used, they shall be first examined and securely locked by a person or persons duly authorized for this purpose." But, however, it did not appear that any person or persons had been so authorized at the pit in question.

The conduct of Pyatt in this instance was most reprehensible, he having been supplied with means, the proper use of which would have kept both him and the boy safe. I do not however revert again to his conduct in palliation of the offence committed by the owner and agent of the colliery in violating the general rule already alluded to, but for the purpose of showing how some workmen occasionally act, and also how unexpectedly and thoughtlessly they sometimes bring about their own destruction and that of others also. Verdicts of accidental death were returned in each case.

On my inspection of the mine after the accident, I found that Pyatt's place of work at the time of the explosion was about 16 yards beyond the air course, which, four days after the accident, was so feeble as to be scarcely perceptible, therefore it was evident that general rule No. 1 had also been infringed.

Subsequently I had the honour to receive your instructions to institute proceedings against the owner or agent of the colliery for the said violation of the provisions of the law, which were accordingly brought on for hearing at the Dudley police court before F. Smith, Esquire, and S. D. Fereday, Esquire, on the 23rd of November last, when John Pettford the agent was charged upon two informations with committing breaches of the general rules of the Mines Inspection Act of 1860.

John Young, Esquire (of the Oxford circuit), instructed by Mr. Bolton, appeared for the prosecution; and Mr. Stokes, solicitor, of Dudley, for the defendant. The first charge was, that "John Pettford, being the agent of the Woodside colliery on the " 18th of June last, did then at a certain pit (No. 10) of the said colliery, where safety-" lamps were required to be used, neglect one of the general rules to be observed in the " said colliery by the said John Pettford as such agent thereof, to wit, by then and there " neglecting to see or observe that the safety-lamps then in use at the said pit were first " examined and securely locked by a person or persons duly authorized for that purpose, " contrary to the statute in that case made and provided."

Mr. Young, in opening the case, said the informations were laid under the 23 & 24 Vict. c. 151. It was unnecessary for him to enlarge upon the importance of the charge against the defendant, but he would mention the simple facts. On the 18th of June last a man named James Pyatt was working in the No. 10 pit, Woodside colliery, and it became necessary to use safety-lamps during the day. Pyatt obtained one which was not locked, and returned to his work. Shortly afterwards there was an explosion, which caused Pyatt's death. He would go no further, but at once call a witness:—

William Lowe stated, "that he was a 'doggy' at No. 10 pit; the defendant was the " agent. On the day in question witness ordered Pyatt to use a safety-lamp. The " lamp was not locked. An explosion took place shortly after, which resulted in the " death of Pyatt and a boy named Raybould. The workman could not have opened " the lamp if it had been locked. The lamps hung up in the pit for any person's " use."

Cross-examined.—"There was no sulphur in the pit on that day. Benjamin Round " was working next the deceased. The pit was examined three times during the day. " There was an indication of sulphur on the Saturday, and the men were ordered to " desist working in the place. Defendant did not give out the lamps. He very seldom " came down the pit."

By Mr. Young.—"Pettford was in the habit of giving directions as to the working " of the pit, and as to the work to be done."

Mr. Stokes said, "if any person was liable it was the charter master, who was the " manager of the pit. The defendant was merely the ground bailiff of the colliery, " and as such he placed responsible persons at each pit. It was a matter of impos-" sibility for a ground bailiff, with a number of pits to visit in the course of a day, to " make further arrangements than what the defendant had carried out. He could not " always be in the pit, and it was well known that a pit might be clear of sulphur one " hour and be filled in the next. Rules 17 and 20 of the special rules of the Colliery " Act defined clearly the party upon whom the blame, if any, should fall."

Mr. Young objected, and said, "his friend (Mr. Stokes) was resting his case upon " special acts instead of the Act of Parliament, which said that the owner and the " agent were liable." "If Mr. Stokes went to the special acts or rules, they did not " throw over the responsibility of these persons."

Mr. Stokes said, "the prosecutor's case had entirely broken down, because it had " not been shown that the defendant was the proper person. He might be the agent, " but he was not the person to see that the lamps were locked."

A long discussion here took place between Mr. Young and Mr. Stokes relative to the position the defendant occupied. At its conclusion the bench retired to consider their decision.

Mr. Smith, upon re-entering the court, said, "there was no doubt that the offence " of using unlocked safety-lamps had been committed, but the Bench were of opinion " that in the present case the defendant was not 'the person duly authorized to per-" form the duty.' The special rules, in express words, stated the person to perform " the duty, and as they were under the powers of the Act, they were as binding as the " Act. The case against the defendant would, therefore, be dismissed."

Upon the second charge, that of allowing defective ventilation in the same pit, being called on—

Mr. Young said, "he should not go on with it, because it would raise the same " question. He would like to ask the magistrates whether they considered the de- " fendant the agent of the colliery or not? The question he had raised in the case " was upon an Act of Parliament, and upon that question the magistrates had not " given any opinion. They had given a decision which he could not think of disputing, " but he should certainly like to have an opinion from the Bench with regard to the " position they thought the defendant held. If this was not given he should apply for " a *mandamus* to compel the magistrates to state the position in which they believed " the defendant was employed." The Bench, however, granted a case for the Court above, the hearing of which is still pending.

No. 55 occurred at the Tipton Green colliery. The deceased, a youth of 15 years, was sent into a gate-road in the mine for a wedge, when he climbed into a headway in course of extension, where he unexpectedly met with a little gas and fired it. He had previously been warned not to enter any place in the mine other than that in which he was employed. He, however, disregarded the injunction, and thereby lost his life, the sad result of his own disobedience.

Accident 57 happened at the Bloxwich colliery. On the 29th of June last, as a miner named Donaldson was proceeding along one of the travelling-roads in the mine, he met with a small quantity of gas, which exploded at his candle and fatally injured him. Another life lost through bad discipline.

In this case it appeared that the deputy, whose duty it was to examine the mine, had for some days been absent from the pit, being too unwell to attend to his duties. He, however, arranged with an ordinary workman, the son of the deceased, to give the miners the instructions necessary for the performance of their work, but unfortunately no orders were given to this new officer to examine the state of the mine previously to the men commencing work; and from the evidence at the inquest, the deputy himself had been most lax in the performance of this important duty.

The jury, however, returned a verdict of accidental death, but added that Mr. Jeavons, the manager, was grossly culpable, upon which the coroner remarked that "the " verdict was not at all in accordance with his own views, for (addressing Mr. Jeavons) " You are worthy of one of manslaughter, and I expected it." On your authority, proceedings were instituted against the manager, Mr. D. Jeavons, for violation of the provisions of the law, the hearing of which took place at the Walsall Petty Sessions, on the 4th of October last, when penalties amounting to 5*l.* 5*s.*, and the costs, were imposed.

No. 85. This was an explosion at the Fishley Colliery, belonging to Messrs. Sparrow. The pit was worked by charter-masters, and it appeared that on the evening before the accident, the miners going to work on the night turn were cautioned by the deputy not to go into the goaves or wastes, owing to the presence of gas. The pit was worked with naked lights, and during the night in question one of the workmen put his candle on a timber prop at the edge of the goaves where he was then at work, when a fall of the roof occurred, and forced a train of gas upon his candle, which ignited the accumulations of gas in the goaves, the flame of which rushed along the gate-road, fatally burning one of the workmen; thus showing the absurdity of the practice of permitting men to work with naked lights near to or in the presence of elements so destructive: and so long as the practice continues, explosions more or less fatal will, I fear, occasionally happen.

Immediately after the explosion I made an examination of the mine, and recommended the owner and agent to exclude for the present all naked lights, and use safety lamps, which recommendation is being carried into effect.

No. 89, the last of this class on the list, took place on the 16th of November last, at one of the Earl of Dudley's coal pits. On the morning in question, as the workmen were proceeding along the gate-road towards the workings, they became alarmed and immediately returned to the pit-bottom, when it appears that orders were given to the men then present to remain there while the charter master and the deputy, C. Rowley, took the safety-lamp through the workings. Two of the workmen, however, had gone along another road in an opposite direction, when the deceased who was a little in advance of his companion, met a quantity of gas and fired it, by which he sustained injuries so severe, that he died 12 days after the explosion; another victim sacrificed principally through his own reckless indifference to danger.

A day or two before the explosion (owing to the illness of the deputy) one of the charter-masters engaged the man Rowley, a bandsman, to act as deputy, which, however, Rowley contradicted in his evidence before the coroner, and stated " that he received no " instructions when told to act as doggy (deputy), beyond that he was to give the men " their candles." " He had not examined the pit that morning (the 16th of November) " nor had it been examined by any one, nor had he ever seen the deputy examine it " beyond the candle box." Levi Harper and Farnham Dando, the charter-masters of the pit, were also examined before the coroner; and Harper stated " that he instructed " Rowley to set the men on, and see that the pit was tried and proved, when he engaged " him as deputy."

It was stated that no signs of explosive gas had been seen previously in this pit. Its unexpected presence, however, shows the desirability of the precaution to examine carefully, with a safety-lamp, the underground workings whether fire-damp may be expected or not.

Falls.

52 persons lost their lives in the mines through falls of coal and roof, 13 of which I consider it necessary to notice, namely: Nos. 7, 10, 12, 14, 18, 22, 29, 34, and 82. The time when and where these accidents occurred will be found opposite these numbers in the list appended to this Report.

Nos. 7, 10, 12, 18, 22 and 82, I have no hesitation in saying were all brought about owing to the absence of timber props. In several of these cases, however, the pikemen themselves had neglected to sprag the coal whilst holing, and thereby greatly contributed to their own destruction.

Accident No. 14 in the list. On the 15th of February last a fall of coal occurred in an opening of a thick coal rib and pillar pit in the Tiled House Colliery, belonging to Mr. James Timmins, which caused the death of two miners, Samuel Geary and William Lunn.

At the inquest one of the witnesses, John Baker, a miner, who was at work close to the men who were killed, and was himself slightly injured by the fall, deposed that John Stevenson, the manager of the pit, was down in the place at half-past six in the morning of the day on which the fall took place, and ordered the deputy working there in the witness's own words, " to have a long tree under them coals." He pointed to the roof or overhanging coal in the opening. A man named Morris was by when Stevenson gave this order, and said he would rather work without than with timber.

Stevenson went away and no timber was put up, though there was plenty lying near. About 11 o'clock the coal fell, killing William Lunn on the spot, and mortally injuring Samuel Geary, which injury he only survived four days.

After being duly cautioned, Stevenson made a statement at the inquest, but was not sworn, to the effect that he gave the order to prop the coal both to Stokes the doggy, and to Morris, and he considered Stokes responsible in his absence.

I made an examination of the pit, accompanied by Mr. Cope, surveyor, and Mr. Timmins, and found that the coal had fallen principally from the roof, but not a single *stick* of timber appeared to have been used, though the opening was about 9 yards long, and about 5½ yards wide, surrounded chiefly by shutt, gob, or loose sides, and gave evidence to that effect before the Coroner, and also that the roof of the place in question should have been supported by timber.

The verdict of the jury was, however, one of accidental death, but at the same time they considered John Stevenson the manager, and the deputy Stokes, blameable for neglecting to timber the workings.

With your permission proceedings were taken against John Stevenson for a violation of the 20th special rule, and he was accordingly summoned before Isaac Spooner, Esquire, stipendiary magistrate, at Sedgley, on the 23d of April last, on the following charge; namely, " that on the 15th day of February 1866, John Stevenson, then being " the manager of a certain thick coal pit at the Tiled House Colliery, situate in the " parish of Kingswinford in the county of Stafford, and being responsible for sufficient " timber being provided for the roofs both of the gate-road and workings of the said pit, " did not provide or cause to be provided sufficient timber for the workings of the said " pit, and which workings were not properly secured where required, contrary to the " special rules then in force at the said colliery."

Several witnesses stated that there was sufficient spare timber in the pit at the time of the accident. The magistrate was therefore of opinion that defendant's liability ceased, and dismissed the case.

With a view, however, to try the case on the merits, a fresh information was laid under the 17th special rule, which came on for hearing on the 4th of June, but was adjourned in consequence of the absence of a witness named Baker, who it was stated had left the district, to the 18th instant, when Mr. Bolton appeared to support the complaint, and James Motteram, Esquire, of the Oxford circuit, instructed by Mr. Maltby, for the defendant. However the hearing of this charge was attended with no better result, at the close of which a long discussion ensued, in which Mr. Bolton contended that though the information was laid under the 20th special rule, which applied to charter-masters or their deputies, that since the offence charged against the defendant, who was manager and not charter-master, was the same as was alleged in the summons, and arose under the same statute, it was competent for the court to convict for that offence under the 17th rule which applies to managers, and that under Jervis's Act the conviction need not follow the summons, provided that there was an offence under the statute, over which the court had jurisdiction, and that the defendant was not misled or taken by surprise by reason of the terms of the summons, which it was clear he was not in this case.

The learned stipendiary adjourned his decision to Friday the 22nd instant, at Wolverhampton, when he dismissed the summons on the merits, and said the defendant would also be entitled to have the summons dismissed on the ground that he is charged, as manager, with an offence against the 20th special rule, which applies only to charter-masters, and their deputies, and not to managers. It was, however, urged in argument that a conviction might be sustained under the summons, if the evidence showed any offence by a manager against any of the special rules which were framed under one statute. I think this is not so; but that, whatever may be the legal form of the conviction, it must, in accordance with principle and practice, be in fact a conviction for the offence charged in the summons to which the defendant appears, and for that only.

A somewhat similar case against a charter-master named Raybould, of the Moor Lane Colliery, was heard when Stevenson was first summoned, which the magistrate dismissed on similar grounds, which was duly reported to Sir George Grey, the then Secretary of State, for the Home Department on the 30th of May last, and on the 13th of June I had the honour to receive his instructions to amend the rule under which these charges were brought, which has been amended accordingly, and it is now being established at the collieries in this district.

No. 34 was also the result of an insufficiency of timber props. Due attention to a face slip which had been discovered in the coal, and a liberal use of timber props and barrs, would doubtless have saved two valuable lives. No. 29, one of the worst cases throughout the year resulted in the death of three persons, and the miraculous escape of two more. The origin of the fall of coal and roof was, in my opinion, the result of what may be fairly termed *hungry mining*, at one of the old thick coal rib and pillar pits, in the Tividale New Colliery. The pit was worked on the charter-master system, and at the time of the accident was nearly brought to a close. On the afternoon of the day on which the fall occurred, the miners were at work in a stall, which, so far as I could see on my examination of the pit after the occurrence, was for the most part surrounded with *shutt* or loose sides, which left little or no support to the overhanging coal. The fall was so immense and so complete, that the whereabouts of the stall which had so recently been full of activity could scarcely be ascertained, as all communication therewith was suddenly cut off, and the only chance left for the recovery of the living and the dead, was by driving or cleansing new head-ways in the floor of the mine underneath the fall and along the side of the stall. This was a work of great difficulty and danger, but happily the efforts of the workmen were eventually crowned with success. Three of the entombed men were got out alive, one of whom only survived the injuries a few days. The other two were comparatively unhurt, having been shielded by a large mass of rock. In this instance nearly the whole of the *pikework* was accomplished, and therefore the charter-master seems to have been determined, if possible, to get the last ton of coal out of the last remaining stall, apparently regardless of all hazard to life and limb.

Thick coal mining, especially when the roof and sides of the stalls, &c., get beyond the practical use of timber, is, as everybody (conversant with the subject) well knows, attended with great risk to the miners employed.

The extraction of overhanging coal, when all the natural support of the superincumbent mass has been removed, notwithstanding support by timber, is dangerous in the extreme, and should neither be practised nor thought of, as any local disturbance or subsidence of the roof or sides of the workings under such circumstances, might at any moment bring about a similar calamity, without the least warning or means of escape.

At the inquest, evidence was given that the coal was propped, which, however, in this case did not secure the safety of the workmen. Nevertheless the jury returned verdicts of accidental death.

Shaft Accidents.

Twenty-five fatalities under this head have occurred during the past year. This number however is seven below the annual average of the last six years. In the years 1860 and 1864 they were respectively 45 and 47.

Nowhere within any of the twelve inspection districts of the United Kingdom have so many shaft accidents been annually recorded, and nowhere else, on so small an area, are so many colliery steam engines and pit-shafts to be found, which no doubt exceed in number that of any other inspection division by at least 50 or 60 per cent. Therefore the loss of life, great as it is, admits of favourable comparison with other districts.

Nevertheless 10 at least of the 25 deaths might have been prevented; namely, Nos, 3, 13, 16, 28, 39, 44, 70, 81, 91, and 94 in the list. Accidents Nos. 3, 28, 39, 70, 81, and 91, would have been prevented if a *permanent travelling* fence had been provided at the pits in question which provision I alluded to in my annual report of 1865; and accidents Nos. 13 and 14 would also have been avoided, had the unfortunate sufferers employed the safety chains, the use of which has been fully described in former reports.

No. 16 occurred at the Park Head Colliery. Deceased had no business in the bottom of the shaft during the ascent and descent of the skips. Indifference to the danger cost him his life.

No. 94. Deceased was employed in the Pelsall Colliery as hooker-on at an upper insett. The arrangement for stopping the skips at a certain point in this insett, whilst operations were being carried on lower down the same shaft, was not of the best kind, which arrangement the unfortunate man either neglected or did not properly understand, and thereby lost his life.

Miscellaneous.

For the year 1866 I have to record 16 accidents of this class, 13 of which, if ordinary care had been exercised, and the provisions of the law duly regarded, were preventible; namely, Nos. 9, 11, 31, 37, 60, 61, 64, 75, and 80, in the list.

Of these, four occurred whilst using gunpowder in blasting operations, Nos. 9, 31, 37, and 64. In such operations, copper skewers and copper rammers should always be used when such tools are required, the absence of which, and the too hasty return of some of the sufferers to a charged hole when the shot has mis-fired, and the improper use of iron tools, has brought about many such accidents.

No. 11. In this instance the hooker-on got into the cage-hole in the pit-bottom, and stayed there till the cage came down and suffocated him on the spot. No sensible man would have gone into such a dangerous place without first signalling to the banksman or engine-man at the pit-top for the cage to cease running.

No. 60 in the list. This lamentable catastrophe occurred on the 12th of July at the Bromford Colliery, belonging to Mr. W. H. Dawes by which the lives of three youths were sacrificed.

At mid-day the deceased persons ceased working in the pit where they were employed, and proceeded along the gate-roads in the direction of the adjoining pit-shaft, with the view of being raised from the mine thereat, but in doing so, whether by accident, or as was suggested at the inquest, to avoid going back into the mine to work, they unfortunately entered some old workings, and eventually got into an old abandoned gate-road, where they were afterwards found dead, having been suffocated by carbonic acid gas.

This sad waste of three lives was owing to the non-observance of the second general rule of the Mines Inspection Act of 1860, which requires such places to be properly fenced off so as to prevent access thereto.

Benjamin Callear (the agent's deputy), one of the witnesses examined at the inquest, said: "I would not have gone there with a candle, and according to the law of the Mines Inspection Act it should have been fenced off."

Mr. James Cope, the agent of the colliery, produced a plan of the workings, and deposed that "he had visited the pit about ten days before the accident took place," and that "it would have been Callear's duty to have had the place fenced off if it had been reported as a dangerous locality," and that "if the place had been fenced there would not have been any lives lost."

The jury, however, returned a verdict of "accidental death," and the coroner, previous to reading the inquisition, called in James Cope, Benjamin Callear, and the charter-master, and informed them of the verdict the jury had returned, but at the same time, saying, "they had had a narrow escape of one of manslaughter."

In accordance with your instructions, proceedings have been taken against the agent of the colliery for a violation of the law, but some difficulty has been experienced in getting the requisite information to support the charge. However, the case was brought on for hearing in December last, and adjourned for the attendance of an important witness; therefore the proceedings are still pending.

Accident 61 took place at the Wednesbury Oak Colliery. Deceased jumped out of the skip at the pit top, missed his footing, and fell to the bottom of the shaft, where he was afterwards found a corpse, the sad consequence of so suicidal an act.

A very distressing accident occurred at the Brownhills Colliery belonging to Mr. W. Harrison, on the 24th of October, 75 in the list.

It appeared that several persons, including one of the engine-men employed at the colliery, were engaged doing repairs in the pumping-pit shaft, and for the purpose of lowering and raising the workmen the winding machinery belonging to the pumping-engine was put into gear, and a three-link flat chain attached.

During the day on which the accident happened the deceased persons had been several times safely lowered and raised in the shaft. However, in the afternoon of the day in question, as they were being lowered for the third or fourth time, the signal was given to stop, and after a very short interval, the signal was given either to raise or lower the men, when it appeared that the engine-man was unable to start his engine. He at once called for assistance, which was immediately rendered, and the instant the machinery was put in motion, the drum-shaft got out of gear, precipitating the two men down the shaft, at the bottom of which their dead bodies were found.

Had an adequate break been attached to this engine, as required by general rule 12 of the Mines Regulation and Inspection Act, these live would doubtless have been saved.

At the inquest upon the bodies evidence was given that the engine-man had put, or caused to be put, a piece of wood between the cog-wheels for the purpose of holding the engine fast when brought to a stand, but whether anything of the kind was so placed between the wheels when the accident occurred, there was no evidence to show. My own opinion, however, in which I was supported by an engineer of eminence, was that something had been placed between the wheels by the engine-man in charge, and that the *lock-nut* of the screw which holds the machinery in gear had not been brought up to its proper place, in consequence of which the wheels would easily be thrown out of gear. This, however, the engine-man positively denied.

The result of the inquest was a verdict of manslaughter against the engine-man who now awaits his trial at the next Stafford assizes.

Having received your instructions to promote a prosecution against the owner for infringing the provisions of the law, he was accordingly summoned before Isaac Spooner, Esquire, stipendiary magistrate, and R. D. Briscoe, Esquire, on the 28th of December last, when penalties amounting to 25*l.* and the costs were imposed, including a penalty of 5*l.* for not securely fencing the "fly-wheel" of the same engine.

Mr. Lewis, solicitor of Wallsall, who appeared for the defendant, argued that the pumping engine did not come within the meaning of the Act. Mr. Spooner, however, together with Mr. R. D. Briscoe, a county magistrate, thought that the Act applied to both description of pits, and fined the defendant 20*l.* and costs.

The bench refused Mr. Lewis a case, but suggested that he should apply for a rule. Which suggestion has been acted upon and a rule *nisi* granted.

No. 80, the last of the miscellaneous cases to which it appears necessary for me to advert, occurred in a powder magazine in a coal pit belonging to Messrs. Lloyds and Company.

On the day of the accident the charter-master's son (quite a youth), who it appeared had charge of the powder, went to the magazine with a candle to serve out the powder to one of the workmen, when from some cause all the powder in the barrel exploded, killing him on the spot.

Another case somewhat similar happened at the Blakeley Wood Colliery. In this instance the powder was kept in a magazine on the surface, and during the temporary absence of the banksman the boy employed on the pit-bank took the key of the magazine, opened the door, and ignited the powder, causing a fearful explosion, by which he was dreadfully mutilated. Gunpowder should always be put out of the reach of children and collier boys, especially in mines, and none but persons of mature age should be allowed to have charge of it.

Ironstone Mines.

During the year 1866, there have been 11 fatal accidents, causing 12 deaths, 2 from explosions of fire-damp, 6 by falls in the mines, 2 in shafts, 1 miscellaneous, and 1 above ground. The accident which resulted in the death of two persons by explosion in the list, occurred on the 20th of August at the West Bromwich Hall Colliery belonging to Messrs. Groucutt. On the morning in question the charter-master was present, and as the first bandful of workmen were descending the pit shaft with a candle, an explosion took place which caused them to relax their hold of the tackle and fall down the shaft, a distance of about 20 yards; one was killed on the spot, and another only survived the injuries a short time. Several more were injured, but they have all recovered.

At the inquest the witnesses proved that no gas whatever had been seen in the mine, and that the ventilation was always good, in consequence of which the practice of examining the pit from the surface with a safety lamp, as required by special rule 28, seems to have been discontinued.

However, in the course of the inquiry it transpired that, during the sinking of the shaft, gas had been observed in a thin seam of coal. But upon my inspection of the pit, no trace of gas, either in the mine, or issuing from the coal, was visible. That the coal in question occasionally and suddenly eliminated gas was evinced a few days after the accident.

It appeared that the charter-master, after examining the mine, found it necessary to kindle a fire in the shaft to assist the ventilation; after which, and whilst ascending the shaft, another explosion occurred, burning him severely. The fire-grate in the shaft was only a few feet above the coal, and no doubt the gas, which had so unexpectedly accumulated, was carried up to the fire by the cover suspended over the tackled skip in which he was then ascending.

Mr. J. Meecham, the agent of the colliery, also deposed, that "he had drawn the " attention of the workpeople to the rule in question, which required an examination of " the pit from the surface with a safety-lamp." "Had this rule been attended to the " men's lives would have been saved." "The rules were in force at the time of the " explosion, and he was glad to see the rule requiring an examination of the mine from " the surface with a lamp; he considered it most important."

He was of opinion that the ventilation had been obstructed by a fall of timber and roof, which took place in the air-course during the night before the accident, and hence an accumulation of gas in the shaft, and an explosion; in which opinion I also venture to concur.

Distinct juries inquired into the cause of the death of the deceased persons, and in each case they returned a verdict of manslaughter against the charter-master, who awaits his trial at the ensuing March assizes.

With regard to the accidents through falls, &c., the foregoing remarks which I have made respecting the fatal accidents in the coal mines apply with equal force in these cases, therefore it may appear unnecessary to lengthen this report by a reiteration of what has already been said respecting similar accidents.

On the 14th of February the dead body of W. Ford was found in an old pit shaft of the Round's Hill Colliery. The pit had been recently filled, but about the time Ford was missed from his home it was only partially filled up. It appeared that he had been to an adjoining pit and got employment, on his way to which he would have to pass near this old pit shaft; therefore, as poor Ford's whereabouts could not be ascertained, his wife suspected he had fallen into the old shaft, which everybody connected with the colliery believed to be impossible. However, I recommended the agent to cleanse the old shaft, which he caused to be done to the depth of about 15 or 20 yards, and then gave it up in despair; but through Mrs. Ford's importunity operations were resumed, and after a few days further search the dead body of Ford was found at the bottom of the shaft, into which, no doubt, he accidentally fell, on his way in the dark to his new place of work.

There was no lack of evidence, however, at the inquest to prove that the shaft was covered over and made secure during the night, though it was open in the daytime, to allow the rubbish to be thrown in from the pit bank. Had the pit been made secure the poor man could not by accident have fallen into it, unless some mischievous person had removed the covering during the night. The jury, however, returned an open verdict.

On the 3rd of October last, three boys, one a stranger named Hartshorn, descended one of the pit shafts at the Sneyd Colliery, at which two of them were employed. On the evening of the day on which they descended, as they were all three being drawn up the shaft again on the water-barrel, the engine-man did not stop his engine till they reached the pulley-wheel of the pit frame, when he suddenly lowered the barrel before the banksman could push the waggon over the pit's mouth, and precipitated the stranger to the bottom, killing him on the spot.

In this case the special rules of the colliery were violated. The charter-master did not leave a competent person in charge of the pit, nor had he caused the sump to be fenced.

The engine-man also infringed the rules. He left the hand-gear of his engine whilst persons were ascending, and lowered them at the top without receiving the signal to do so from the banksman.

With your permission the charter-master and the engine-man were summoned before the Willenhall bench, on the 31st of December last, for their respective violations of the said rules, when penalties were imposed on the charter-master and also on the engine-man, amounting to 5*l.* 10*s.* and the costs.

On the 21st of the same month a boy went to the side of the pit-shaft at the Tantany Colliery, and by some means fell headlong into it and was killed.

If the working pit-shafts were better fenced, such accidents would seldom, if ever, be heard of. These cases do not come within the meaning of the Inspection Act, therefore they are not included in the returns.

Education.

With regard to the education of miners' children in this district, I have to state that nothing worthy of special remark has come under my observation during the past year. An Act prohibiting the employment of children till they attain a certain age ought not to be confined to any particular industry, it should be of general application.

I have, &c.
James P. Baker,
Inspector of Mines.

To the Right Hon. S. H. Walpole, M. P., Her Majesty's Principal Secretary of State for the Home Department.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS of LIFE arising therefrom, in the SOUTH STAFFORDSHIRE and WORCESTERSHIRE DISTRICT, during the Year ending 31st December 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866. Jan. 2	1	Titford - -	Rowley Regis -	S. Bennett - -	C. Chambers -	Deputy -	—	A piece of coal rolled against his leg and broke it (in thick coal pit). Died this day.	–	–	–	1	–	1
„ 6	2	Old Moorcroft	Bilston - -	Messrs. Lloyds - -	W. Amos - -	Pikeman -	56	Fall of coal in "thick coal" rib and pillar pit.	–	1	–	–	–	1
„ 10	3	Willingsworth -	Wednesbury -	J. and H. Haines -	T. Glaze - -	Collier	17	Walked out of the hovel into pit shaft	–	–	1	–	–	1
„ 11	4	Salt Well -	Netherton -	Earl of Dudley - -	N. Allport -	Bandsman -	—	Accidental fall of coal in thick coal pit	–	1	–	–	–	1
„ 13	5	Brierley - -	Bilston - -	J. Yardley - -	J. Phillips - -	Sinker -	54	Fell out of sinking pit "bowk" whilst ascending.	–	–	1	–	–	1
„ 22	6	Yew Tree -	Coseley - -	Mrs. Gibbons - -	T. Jones - -	Ditto -	44	Fell off scaffold in a sinking pit -	–	–	1	–	–	1
„ 23	7	Clattershall -	Brierley Hill -	Bowen and Bird - -	T. Barker - -	Pikeman -	36	Fall of coal in "thick coal pit," caused by improperly removing a timber prop.	–	1	–	–	–	1
„ 25	8	Park Head -	Dudley - -	Evers and Martin - -	T. Jones - -	Collier -	15	Crushed under loaded skip in gate road	–	–	–	1	–	1
„ 26	9	Gospel Oak -	Tipton - -	Messrs. Grazebrook and Aston.	J. Woolley - -	Pikeman -	—	Injured by premature explosion of gunpowder on the 19th instant. Died this day.	–	–	–	1	–	1
Feb. 9	10	Crab Tree -	Wednesbury -	Shaw and Mason - -	E. Bowden - -	Ditto -	35	Fall of coal in thick coal rib and pillar pit. Deceased neglected to timber.	–	1	–	–	–	1
„ „	11	Wednesbury New Mine.	West Bromwich	Horton and Whitehouse -	T. Care - -	Hooker-on	51	Crushed by cage and suffocated under it.	–	–	–	1	–	1
„ 14	12	Rookery -	Bilston - -	G. B. Bloomer - -	J. Tranter -	Collier -	14	Fall of coal, new mine coal pit. -	–	1	–	–	–	1
„ „	13	Foxyards -	Tipton -	Earl of Dudley - -	J. Wild - -	Ditto -	14	Fell out of skip whilst ascending -	–	–	1	–	–	1
„ 15	14	Tiled House -	Kingswinford -	J. Timmins - -	W. Lunn - -	Ditto -	13	Fall of coal in thick coal pit. No timber used in this instance.	–	1	–	–	–	1
„ 17	15	Moat - -	Walsall - -	Messrs. Fellows - -	W. Stretton -	Bandsman -	40	Injured by explosion of fire-damp on the 6th instant. Died this day.	1	–	–	–	–	1
„ 19	„	Tiled House -	Kingswinford -	J. Timmins - -	S. Gearey - -	Ditto -	24	Injured by accident No. 14. Died this day.	–	1	–	–	–	1
								Carried forward - -	1	7	4	4	–	16

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
								Brought forward	1	7	4	4	–	16
1866. Feb. 27	16	Park Head	Dudley	S. Garrett	J. Edwards	Hooker-on	18	Struck by a piece of coal which fell from an ascending skip, whilst improperly standing in the bottom.	–	–	1	–	–	1
Mar. 1	17	Alston	Oldbury	Alston Colliery Company	A. Mathews	Bandsman	26	Injured by fall of coal in thick coal on the 28th ultimo; died this day.	–	1	–	–	–	1
„ 5	18	Deepfields	Bilston	Earl of Dudley	J. Morgan	Ditto	22	Fall of coal in thick coal; no timber used.	–	1	–	–	–	1
„ 13	19	Tipton Hall	Tipton	Welch and Barrows	A. Fisher	Pikeman	63	Fall of roof and gob in thick coal rib and pillar pit, in gate road 6 feet wide.	–	1	–	–	–	1
„ 23	20	Ocker Hill	Ditto	Haines and Underhill	C. Adams and W. Hill	Bandsman Ditto	35 54	Injured by explosion of gas on the 16th instant; died this day.	2	–	–	–	–	2
„ „	21	Holly Acre	Abberley	Messrs. Norwood	J. Evans	Collier	20	Heavy gale of wind blew a chimney stack down, part of which fell down pit shaft whilst deceased was engaged therein.	–	–	–	1	–	1
„ 24	22	Gawn	Rowley Regis	W. Mills	J. Hill	Bandsman	48	Fall of coal in thick coal pit; no timber used.	–	1	–	–	–	1
„ „	23	Spring Vale	Bilston	Spring Vale Colliery Company.	T. Goodman	Deputy	—	Smothered in an old thick coal rib and pillar pit whilst removing timber props.	–	–	–	1	–	1
„ 27	24	Fishley	Pelsall	Fishley Colliery Company	T. Cooper	Bandsman	41	Fell out of cage whilst ascending	–	–	1	–	–	1
„ 31	25	Sandy Gay	Bilston	T. Johnson	S. Edwards	Ditto	—	Fall of coal in thick coal rib and pillar pit, from a slip not previously seen.	–	1	–	–	–	1
April 7	26	Hateley Heath	West Bromwich	T. Millership	J. Whitworth	Horse driver	19	Fall of coal in thick coal pit from between two timber props, caused by a slip not previously seen. Deceased died same day at his own house.	–	1	–	–	–	1
								Carried forward	3	13	6	6	–	28

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866.								Brought forward -	3	13	6	6	–	28
April 17	27	Brownhills -	Walsall - -	W. Harrison - -	H. Crowe - -	Collier -	21	Fell out of the cage whilst ascending pit shaft.	–	–	1	–	–	1
,, 19	28	Battyfield -	Bilston - -	T. Pemberton - -	J. Darby - -	Boy - -	—	Fell down pit shaft at which he was employed as gin driver.	–	–	1	–	–	1
,, 20	29	Tividale New -	Oldbury - -	H. B. Whitehouse -	E. Smith - - M. Hewitt -	Bandsman - Ditto -	— —	Fall of coal in thick coal rib and pillar pit.	–	2	–	–	–	2
,, 24	,,	Ditto - -	Ditto - -	H. B. Whitehouse - -	W. Johnson -	Ditto -	—	Injured by accident No. 29; died this day.	–	1	–	–	–	1
,, 26	30	Granville -	Rowley Regis -	Swindell and Collis -	T. Berresford -	Pikeman -	—	Fall of coal in thick coal, top working; accidental.	–	1	–	–	–	1
,, ,,	31	Old Park -	Dudley - -	Earl of Dudley - -	T. Shuker - -	Ditto -	33	Premature explosion of gunpowder	–	–	–	1	–	1
,, 27	,,	Ditto - -	Ditto - -	Ditto - - -	W. Burrows -	Ditto -	50	Injured by accident No. 31; died this day.	–	–	–	1	–	1
,, 28	32	Salt Well -	Ditto - -	Ditto - - -	S. Timmins - -	Bandsman -	21	Fall of coal in thick coal pit -	–	1	–	–	–	1
,, 30	33	Coal Leasow -	Wordsley -	Harris & Co. - - -	C. Plant - -	Collier -	14	Fall of coal from side of gate-road in new mine coal.	–	1	–	–	–	1
May 2	34	Herbert's Park	Darlaston - -	D. Jones - - -	T. Colley - - J. Rhodes - -	Bandsman - Ditto -	20 15	Fall of roof rock in Mealey Grey coal pit, caused by a slip which ran parallel with the working face of the coal seam.	–	2	–	–	–	2
,, 3	35	Essington -	Near Wolverhampton.	Darlaston Steel and Iron Company.	J. Osbourne -	Pikeman -	30	Whilst cutting top coal in a waste the roof fell and killed him.	–	1	–	–	–	1
,, 4	36	Tividale -	Rowley Regis -	Earl of Dudley - -	J. Hunt - -	Ditto -	17	Fall of coal in thick coal pit -	–	1	–	–	–	1
,, 8	37	Cannock and Rugeley.	Hednesford -	Cannock and Rugeley Colliery Company.	J. Davies - -	Sinker -	31	Whilst driving a skewer into a charged hole, the powder ignited and killed him on the spot.	–	–	–	1	–	1
,, 10	38	Old Park -	Kingswinford -	Earl of Dudley - -	P. Jukes - -	Pikeman -	32	Fall of roof in thick coal; injured on the 26th ult., died this day -	–	1	–	–	–	1
,, 15	39	Spring Vale -	Bilston - -	Spring Vale Colliery Co. -	J. Smith - -	Charter-master.	50	Pushed tub into the pit shaft and followed it. Had neglected to provide means to prevent such an accident, contrary to special rule 20.	–	–	1	–	–	1
								Carried forward -	3	24	9	9	–	45

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
								Brought forward -	3	24	9	9	–	45
1866. May 19	40	Blakeley Wood	West Bromwich	John Bagnall & Sons -	C. Fox - -	Collier -	13	Explosion of powder magazine on surface, which the deceased had improperly got into and ignited the powder.	–	–	–	–	1	1
„ 28	41	Wind-Mill End	Near Dudley -	Earl of Dudley - -	J. Hollies - -	Deputy -	42	Sudden fall of coal in thick coal pit whilst removing a timber prop; injured on the 17th inst., died this day.	–	1	–	–	–	1
„ „	42	Bentley -	Walsall - -	Chillington Iron Company	J. Oliver - -	Collier -	—	Injured on the 14th March last in thin coal mine; died this day.	–	1	–	–	–	1
„ 29	43	Nagersfield -	Wordsley -	Skelding & Edwards -	E. Barker - -	Ditto -	18	A piece of clod rolled off the side of a gate-road in thin coal pit -	–	–	–	1	–	1
„ 30	44	Spring Vale -	Bilston - -	Spring Vale Colliery Co. -	H. Kinsey - -	Pikeman -	21	Injured on the 28th ultimo. Fell out of skip whilst ascending pit shaft with several other workmen; died this day.	–	–	1	–	–	1
„ 31	45	Wallows -	Kingswinford -	Earl of Dudley - -	A. Grey - -	Ditto -	25	Fall of coal in thick coal pit.	–	1	–	–	–	1
„ „	46	Dunkirk Mill -	West Bromwich	Warden & Hartland -	D. Gibbons - -	Engine-man	27	Fell part way down pumping pit shaft.	–	–	1	–	–	1
June 1	47	Tiled House -	Kingswinford -	J. Timmins - - -	T. Turner - -	Sinker -	64	Whilst ascending sinking pit shaft upon a piece of rock, the "rope" coil forced the shrouding off the gin wheel, which allowed the rope itself to slip off, precipitating deceased to the bottom.	–	–	1	–	–	1
„ 4	48	Knowle -	Rowley Regis -	Turner & Skelding -	J. Westwood -	Deputy -	39	Fall of roof in thick coal pit gate-road whilst deceased was standing a tree; accidental.	–	1	–	–	–	1
„ 5	49	Rough Hay	Darlaston -	Messrs. Addenbrook -	P. Kildoy - -	Bandsman -	60	Fall of roof in new mine coal from between two slips. He died same day at his own home.	–	1	–	–	–	1
								Carried forward - -	3	29	12	10	1	55

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
								Brought forward -	3	29	12	10	1	55
1866. June 8	50	Havacre -	Bilston - -	Mrs. Gibbons - -	E. Pearce - -	Bandsman -	45	Fell off pit frame on the 6th inst., died this day.	–	–	–	–	1	1
„ 9	51	Withymoor -	Netherton -	W. H. Dawes - - -	J. Coates - - Z. Knowles -	Ditto - Ditto -	45 19	Fall of coal in bottom part of thick Coal workings from a slip not previously seen, brought about by a "bump."	–	2	–	–	–	2
„ 19	52	Marsh Lane -	West Bromwich	E. Simkin & Co. - -	E. Tate - -	Horse driver	—	Horse ran away and crushed him to death.	–	–	–	1	–	1
„ 20	53	Woodside -	Dudley - -	Cochrane & Co. - -	J. Pyatt - -	Pikeman -	42	Injured by an explosion of fire-damp on the 18th inst.; died this day.	1	–	–	–	–	1
„ 22	54	Gospel Oak -	Tipton - -	Messrs. Grazebrook & Aston	H. Rowley - -	Ditto -	46	Fall of coal in bottom coal pit.	–	1	–	–	–	1
„ 23	55	Tipton Green -	Tipton - -	Willetts and Hammond -	H. Breakway -	Collier boy	15	Injured by an explosion of fire-damp on the 14th inst.; died this day. Deceased entered a head way contrary to orders.	1	–	–	–	–	1
„ 27	56	Eagle - -	West Bromwich	Eagle Colliery Company	W. Fryer - -	Band deputy	53	Fall of coal in thick coal pit, caused by a "bump."	–	1	–	–	–	1
July 3	57	Bloxwich -	Walsall - -	Bloxwich Colliery Company	E. Donaldson -	Pikeman -	52	Explosion of fire-damp on the 30th ult.; died this day.	1	–	–	–	–	1
„ „	58	Woodside -	Dudley - -	Cochrane & Co. - -	J. Pearson - -	Deputy -	24	Fall of coal in thick coal pit whilst in the act of removing a timber prop.	–	1	–	–	–	1
„ 5	59	Old Moorcroft	Bilston - -	Darlaston Steel and Iron Company.	B. Jones - -	Collier boy	—	Injured by explosion of fire-damp on the 26th ult.; died this day.	1	–	–	–	–	1
„ 12	60	Bromford -	West Bromwich	W. H. Dawes - -	S. Turner - - W. Bate - - J. Chambers -	Collier - Ditto - Ditto -	12 12 17	Suffocated by carbonic acid gas in an abandoned gate road. (*See* Report.)	–	–	–	3	–	3
„ „	61	Wednesbury Oak	Tipton - -	P. Williams and Sons -	T. Foster - -	Pikeman -	22	Deceased was too impatient to wait for the runner (or pit waggon) to be pushed over the shaft, jumped out of the skip, and fell down pit shaft.	–	–	–	1	–	1
								Carried forward -	7	34	12	15	2	70

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
								Brought forward -	7	34	12	15	2	70
1866. July 20	—	Woodside -	Dudley - -	Cochrane & Co. - -	D. Raybould -	Collier boy	14	Injured by accident No. 53; died this day.	1	–	–	–	–	1
„ 27	62	Copy Hall -	Walsall - -	Copy Hall Company -	J. Woodhouse -	Bandsman -	21	Injured by an explosion of fire-damp on the 11th inst.; died this day.	1	–	–	–	–	1
„ 29	63	Lays New -	Stourbridge -	Brown and Freer - -	W. Noakes - -	Collier boy	15	Fall of roof in Brooch coal pit, brought about by a piece of coal rolling against a timber prop, which it knocked out, and thus allowed the roof to fall.	–	–	–	1	–	1
Aug. 1	64	Birds Leasow -	Near Dudley -	Robinson and Jones -	J. Hickman - -	Pikeman -	—	Premature explosion of shot; injured on the 28th ult.; died this day.	–	–	–	1	–	1
„ 6	—	Copy Hall -	Near Aldridge -	Copy Hall Company -	W. Long - -	Bandsman -	—	Injured by accident, No. 62; died this day.	1	–	–	–	–	1
„ 11	65	Union - -	West Bromwich	P. Williams & Co. - -	S. Martin - -	Ditto -	40	Fall of coal in thick coal pit. Deceased rushed out of his place of work to escape, but he was unfortunately struck by the fall and killed.	–	1	–	–	–	1
„ 17	66	Coneygree -	Tipton - -	Earl of Dudley - -	G. Rolason - - J. Doyle - -	Bandsman deputy. Ditto -	23 34	Fall of overhanging coal from top of a pillar in thick coal, brought about by a "bump."	–	2	–	–	–	2
„ 31	67	Groveland -	Dudley Port -	J. Bagnall - - -	W. Smith - -	Pikeman -	27	Accidental fall of coal from a slip in thick coal whilst deceased was pulling rates (loose coal).	–	1	–	–	–	1
Sept. 6	68	Moat - -	Tipton - -	Tipton Moat Colliery Company.	G. Whitehouse -	Pikeman -	23	Fall of coal in a thick coal gob gate-road.	–	1	–	–	–	1
„ 5	69	Cannock Chase	Near Walsall -	Cannock Chase Colliery Company.	J. Hudson - -	Horse-driver	14	Head crushed by tub in gate road on the 3rd instant.; died this day.	–	–	–	1	–	1
„ 12	70	Cannock and Rugeley.	Near Rugeley -	Cannock and Rugeley Colliery Company.	S. Radford - -	Banksman -	16	Pushed tub into the pit shaft and followed it. He died at his own home same day.	–	–	1	–	–	1
								Carried forward -	10	39	13	18	2	82

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866.								Brought forward -	10	39	13	18	2	82
Sept. 19	71	Willingsworth -	Wednesbury -	J. Bailey - - -	J. Biddleston -	Bandsman and Timber-setter.	35	Fall of coal in thick coal. The stall was propped with timber.	–	1	–	–	–	1
„ 23	72	Old Park -	Dudley - -	Earl of Dudley - -	J. Nock - -	Horse-driver	20	Fall of coal from the roof, brought about by a "bump" which forced a timber prop out in thick coal pit.	–	1	–	–	–	1
„ 27	73	Brierley - -	Bilston - -	J. Yardley - - -	E. Davies - -	Sinker -	20	Fell out of bowk whilst ascending pumping pit shaft.	–	–	1	–	–	1
Oct. 18	74	Withymoor -	Rowley Regis -	W. H. Dawes - -	J. Perry - -	Bandsman	31	Fall of shutt in thick coal gate-road lower workings, which knocked the timber settings out and smoothered him.	–	–	–	1	–	1
„ 24	75	Brownhills -	Near Walsall -	W. Harrison - -	J. Benton and - T. Ball - -	Engineer - Sinker -	35 —	Winding machinery was by some means forced out of gear, by which the deceased were precipitated down pumping pit shaft.	–	–	–	2	–	2
„ „	76	Wall End -	Bloxwich -	R. Thomas - - -	J. Wright - -	Bandsman -	24	Crushed by a rate of coal in bottom coal on 19th inst., died this day.	–	1	–	–	–	1
„ 28	77	Harden -	Near Walsall -	Fishley Colliery Company	H. Jones - -	Engineer -	—	Fell down sinking pit shaft whilst adjusting the lander belonging to the pump; injured on the 20th instant, died this day.	–	–	1	–	–	1
„ „	78	Netherend -	Near Stourbridge	J. King and Co. -	E. Brookes -	Pikeman -	18	Fall of coal in thick coal, the result of a "bump."	–	1	–	–	–	1
Nov. 1	79	Rounds Hill -	Dudley - -	Earl of Dudley - -	W. Leach - -	Ditto -	28	Injured whilst setting a timber prop in gate-road on the 20th ultimo; died this day.	–	1	–	–	–	1
„ 2	80	Burrs - -	Wednesbury -	Messrs. Lloyds and Co. -	S. Hawkins -	Deputy -	17	Explosion of gunpowder.	–	–	–	1	–	1
„ „	81	Meadows -	Willenhall -	J. Jones and Co. - -	E. Wires - -	Banksman -	—	Walked backwards towards pit shaft, and fell into it.	–	–	1	–	–	1
								Carried forward -	10	44	16	22	2	94

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Deaths, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866.								Brought forward	10	44	16	22	2	94
Nov. 9	82	Netherton	Dudley	Messrs. Grazebrook	S. Round	Pikeman	42	Fall of fine coal bat in thick coal upper workings whilst holing. Had neglected to sprag. This is the fifth of five brothers killed in thick coal.	–	1	–	–	–	1
„ 12	83	Hall End	West Bromwich	H. Parish	T. Phillips	Bandsman	49	Fall of coal in "thick coal," whilst in the act of getting down roof coal.	–	1	–	–	–	1
„ 16	84	Himley	Near Dudley	Earl of Dudley	W. Woodall	Ditto	16	Fall of coal in thick coal	–	1	–	–	–	1
„ „	85	Fishley	Bloxwich	Fishley Colliery Company	T. Edwards	Ditto	—	Explosion of fire-damp on the 14th instant; died this day.	1	–	–	–	–	1
„ 19	86	Deepfield	Bilston	Earl of Dudley	W. Jarvis	Ditto	45	Fall of rock from roof in thick coal pit; insufficient timber.	–	1	–	–	–	1
„ 22	87	Alston	Oldbury	Alston Colliery Company	J. Shakespeare	Ditto	50	Fall of timber props and settings, caused by a "bump" which forced them out of place, in thick coal pit.	–	1	–	–	–	1
„ 28	88	Tividale Hall	Near Oldbury	S. Bradley	R. Humphries	Pikeman	48	Fall of coal in thick coal pit. About a ton brazils fell from a slip; injured on the 12th instant, died this day.	–	1	–	–	–	1
„ „	89	Coneygree	Rowley Regis	Earl of Dudley	T. Williams	Bandsman	24	Injured by explosion of fire-damp on the 16th ultimo; died this day.	1	–	–	–	–	1
„ 29	90	Hurst	Tipton	S. Rowley	R. Smith	Banksman	36	Fell down pumping pit shaft from an upper insett on the 9th instant; died this day.	–	–	1	–	–	1
Dec. 1	91	Chillington	Wolverhampton	Chillington Company	W. Morris	Ditto	17	Fell backwards into pit shaft	–	–	1	–	–	1
„ „	92	Black Waggon	Corngreaves	New British Iron Company	T. Wiltshaw	Collier boy	12	Piece of rock fell off the side of gate-road in thick coal pit.	–	1	–	–	–	1
„ 12	93	Wood Farm	Bloxwich	Jeavons and Mitchell	T. Kent	Pikeman	–	Explosion of fire-damp on the 4th instant; died this day.	1	–	–	–	–	1
„ „	94	Pelsall	Near Walsall	B. Bloomer and Sons	J. Hayward	Hooker-on	19	Fell down shaft from an upper insett.	–	–	1	–	–	1
„ 15	95	Gospel Oak	Tipton	Grazebrook and Aston	G. Glover	Collier	15	Fall of coal in thin mine	–	1	–	–	–	1
„ 18	96	Fullwoods End	Coseley	Messrs. Turley	J. Small	Band deputy	47	Explosion of fire-damp on the 13th instant; died this day.	1	–	–	–	–	1
								Total	14	52	19	22	2	109

List of the FATAL ACCIDENTS and LOSS OF LIFE in IRONSTONE MINES in the SOUTH STAFFORDSHIRE and WORCESTERSHIRE DISTRICT, during the Year ending 31st December 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Iron-stone and Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866. Jan. 24	1	Cockshutts	Wolverhampton	Aston and Shaw	S. Chirm	Gin driver	13	Fell into pit shaft	–	–	1	–	–	1
„ „	2	Friar Park	Wednesbury	W. H. Dawes	J. Rowley	—	–	Explosion of gunpowder on the 15th inst.; died this day.	–	–	–	–	1	1
Mar. 6	3	Old Park	Ditto	Lloyds Fosters	C. Shepherd	Pikeman	46	Fall of ironstone measures	–	1	–	–	–	1
„ 30	4	New Cross	Wolverhampton	H. B. Whitehouse	S. Watts	Miner	–	Fall of measures	–	1	–	–	–	1
Apr. 14	5	Bentley	Walsall	Chillington Company	H. Baker	Pikeman	–	Fall of blue flat measures	–	1	–	–	–	1
„ 26	6	Willenhall New	Willenhall	Fletcher, Solly, & Co.	M. McAnn	Hooker-on	16	Struck by something which fell down pit shaft.	–	–	1	–	–	1
May 2	7	Bromford	West Bromwich	W. H. Dawes	— Phillips	Miner	–	Fall of rock roof; injured on the 23d March last; died this day in Birmingham Hospital.	–	1	–	–	–	1
Aug. 20	8	West Bromwich Hall.	Ditto	Messrs. Groucutt	J. Hammond J. Davies	Ditto Ditto	– 28	Explosion of fire-damp in pit shaft, whilst descending.	2	–	–	–	–	2
Sept. 23	9	Coneygree	Dudley	Earl of Dudley	J. Taylor	Ditto	21	Injured internally on the 15th inst. by lifting a piece of ironstone; died this day.	–	–	–	1	–	1
Nov. 16	10	New Cross	Wolverhampton	H. B. Whitehouse	D. Carey	Pikeman	–	Fall of roof	–	1	–	–	–	1
„ 30	11	Friar Park	Wednesbury	W. H. Dawes	S. Webb	Bandsman	56	Fall of roof in gate-road, which knocked the timber setting out.	–	1	–	–	–	1
									2	6	2	1	1	12

Mr. Wales' Report.

REPORT on the WORKING of the MINES INSPECTION ACT (23 & 24 Vict. c. 151.) for the SOUTH WALES DISTRICT, for the Year ended 31st December 1866.—By THOMAS E. WALES, Esq.

SIR, Swansea, 28th February 1867.

As Inspector of Mines for the South Wales District, I have the honour to transmit to you herewith my report for the year ended December 31st, 1866.

The number of fatal accidents, and loss of life arising therefrom, are, I am happy to state, considerably less than the previous year, as will be seen by the following figures:—

Total lives lost in 1865 - - - - - - -	159
Ditto ditto 1866 - - - - - - -	120
Decrease in the year 1866 - - - - - -	39

When and how these accidents have occurred will be seen from the following monthly statement:—

MONTHLY STATEMENT of DEATHS caused by ACCIDENTS in the COAL MINES of the SOUTH WALES DISTRICT in the Year 1866.

—	Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	On surface. Machinery.	On surface. Miscellaneous.	TOTAL.
January - - - -	—	—	3	—	2	3	1	2	11
February - - - -	2	—	1	—	—	2	—	—	5
March - - - -	1	1	3	—	3	2	—	1	11
April - - - -	1	3	5	—	—	2	—	3	14
May - - - -	—	—	5	1	—	5	—	—	11
June - - - -	—	—	6	—	3	—	1	2	12
July - - - -	—	—	3	—	1	—	—	—	4
August - - - -	2	1	1	—	—	4	—	—	8
September - - -	1	1	2	—	1	2	—	1	8
October - - - -	2	1	1	—	1	6	—	1	12
November - - -	1	3	7	1	2	—	—	—	16
December - - -	3	1	1	—	2	1	—	2	8
Total - - -	13	11	38	2	15	27	2	12	120

And the annexed tabular form will show the per-centage of fatal accidents and persons killed, the quantity of coal raised per each fatal accident, and quantity of coal raised per each life lost:

	Year 1866.	Year 1865.
Computed number of persons employed - -	29,200	29,076
Computed quantity of coal raised in tons - -	9,376,443	8,531,336
Number of separate fatal accidents - -	113	118
Number of lives lost by ditto - -	120	159
Persons employed per separate fatal accident -	258	246
Persons employed per life lost - - -	243	182
Tons of coal raised per separate fatal accident -	82,977	72,299
Tons of coal raised per life lost - - -	78,137	53,656

Eight fatal explosions have occurred during the year, resulting in the death of 13 persons.

The causes of, and the circumstances under which each have occurred, have been carefully examined into.

The first (No. 13 accident) occurred on Tuesday, February 13th, in the "Four Feet" workings, Cwm Neol Colliery, then the property of the United Merthyr Collieries' Company, but now owned by the Powell Duffryn Steam Coal Company, Limited, and resulted in the loss of two lives. Fortunately this explosion occurred when only a few men were in the mine. The district in which it took place was worked with safety-lamps, but great carelessness had been permitted in their use.

From the examination I made after the accident I considered the quantity of air passing barely sufficient to provide against contingencies in works so extensive, but I discovered no gas, and attribute the direct cause of the accident to one of the deceased, against the rules of the colliery, having had a naked light, with which the gas came in contact. The accumulation of gas was probably due to the entire or partial neglect of a door.

After a protracted investigation, the jury returned the following verdict:—

"We find that the deceased came to their deaths from an explosion of gas in the "Cwm Neol Pit, on the 13th February, and that such explosion was caused by a naked "light used by the deceased, Henry Hughes. We also find, that the discipline of the "colliery was very bad, that there was not a sufficient quantity of air for the proper "ventilation of the pit, that the roadways were not sufficiently high for the purpose for "which they were required; and we recommend that the Inspector's advice should be "immediately adopted."

The second explosion (No. 25 accident), resulting in the death of one person, named Richard Lowering, occurred in the Brithdir Colliery, the property of the Dynevor Coal Company, on Saturday, March the 31st. This explosion was due to a door not having been placed to carry the air into the face of the level immediately after a certain communication had been made which allowed it to pass by a nearer route, and gas accumulated and came in contact with the deceased's naked light.

The third explosion (No. 39 accident) occurred in the Pantyfynon Colliery, belonging to Messrs. David Lloyd and Son, on Monday, April the 30th, also causing the death of one person, named William Watkin. This explosion was due to the deceased having unexpectedly struck into an old work containing inflammable gas, whilst working with a naked light. A slight mistake in a survey showed the distance on the plan between the stall in which the deceased worked and that containing the gas to be more than it proved to be.

The fourth explosion (No. 69 accident) occurred on Tuesday, the 21st of August, in a part of the Tila Coch Colliery, belonging to Mr. Thomas Jones, and resulted in the death of two persons, named Wm. Bedlington, 57, mining engineer, and Enoch Frances, 40, contractor. The "Four Feet Vein," in which this explosion occurred, had not been worked for several years, and, except on rare occasions, had not been visited by any one during that time, nor any artificial means resorted to to produce ventilation. One of the deceased, W. Bedlington, it appeared had been engaged professionally to report upon the colliery, and the other deceased, Enoch Frances, was employed at the colliery, and had occasionally visited the workings in question. It was known to the officials, of whom the deceased, Enoch Frances, was one, that there were large accumulations of gas in this mine; and it was also elicited at the inquest that the two deceased had made an examination of these workings on the day previous to the explosion, when they found gas there.

When the two deceased descended the shaft on the day of the explosion they took one safety-lamp, and only the bottom of another, and it was therefore inferred that a naked light had been used with which the gas had come in contact.

As they were the only persons in the mine when the explosion occurred, and were quite dead when recovered, no reliable information could be obtained as to how the accident occurred.

The deceased, Mr. Bedlington, was a person of great experience as a mining engineer, and it is difficult to conceive how he could, under the particular circumstances, have either himself used or allowed any one else to use a naked light on the said occasion. In my opinion the deceased ought not to have been allowed to make an inspection of those "Four Feet" workings until such workings had been thoroughly examined by the officials of the colliery, and the ventilation restored.

The fifth explosion (No. 77 accident) occurred in the Bwllfa Colliery, belonging to the Bwllfa Coal Company, on Saturday, September 15th, resulting in the death of a boy named Thomas King, 15 years of age. This explosion occurred in the "Two Feet Mine" workings of the colliery, and was probably due to a door having been broken down by a fall of stone, which took place between the time of the fireman making his examination and the deceased going into *his place*, probably not more than 1½ or 2 hours. The fireman stated on oath at the inquest that he had examined the deceased's place that morning, and found it perfectly free from gas and quite safe. From my examination, I have no doubt as to the door having been knocked down, but whether before or after the explosion occurred I was unable to satisfy myself.

This vein of coal is by no means a fiery one, and is worked with naked lights. The quantity of gas fired was not large, but unfortunately the explosion occurred when the deceased was in a very low part of the mine, which prevented him from getting below the flame or fire.

The sixth explosion (No. 88 accident) occurred in the Gwendraeth Colliery, belonging to Mr. David Watney, on Tuesday, October the 16th, resulting in the death of two boys. This explosion was caused by a breakage of a part of the pumping machinery, which allowed a large quantity of water to fall down the upcast shaft, and reversed the current of air in the mine. This vein of coal does not give off much gas, and is also worked with naked lights.

From my inspection of the mine, I think there had been a small quantity of gas lurking in the old works, which the reversal of the air current brought out upon the deceased's naked light, and caused the explosion.

The seventh explosion (No 101 accident) occurred on Friday, November 9th, in the "Little Vein" coal workings, Buxton Pit, belonging to the Dowlais Iron Company, and resulted in the death of one person. On the morning of the explosion the fireman (whose duty it was to thoroughly examine all the "workings" before the men were allowed to proceed to their working places) discovered gas in the face of a certain cross-heading, and properly placed the danger signal to indicate the same, but unfortunately he allowed a man to go to work in a stall not very far from the accumulation of gas, and when this man fired his shot it either ignited a small quantity of gas in the gob, or the concussion from the shot disturbed the gas in the heading, and brought it upon the naked lights of some other men, who were working some considerable distance from the gas. In my opinion, the fireman displayed a great want of both judgment and care in allowing this man to work so near the gas in question, and especially as the air had to pass from it to the man, who was working with a naked light.

The eighth explosion (No. 113 accident) occurred on Monday, December 24th, in the Abercwmboy Colliery, Aberdare, belonging to Messrs. David Davies and Sons, and resulted in the death of three persons. This explosion occurred in the "Four Feet" vein, which, owing to its fiery nature, is worked exclusively with locked safety-lamps. The three deceased, with several other persons, descended the pit in question about 12 o'clock on the Sunday night, to do certain work, and each person, before he descended, was furnished with a safety-lamp, which on their reaching a fixed place in the mine were duly examined and locked by a person appointed for that purpose. Besides examining and locking the safety-lamps, however, it was also the duty of this man to have made an examination of the places in which the deceased and the others were to work, prior to their going into such places, on the morning in question. The place to which they (the three deceased) proceeded to work had not been examined, but the person whose duty it was to have done so stated that when he locked the deceased's lamps he cautioned them against going beyond the "lamp station" until he had examined that part of the mine. Several witnesses on oath at the inquest also spoke to their having heard the fireman request the deceased to wait, which unfortunately they disregarded, and went into the stall in which between the Saturday night previous and their entering it a large quantity of gas had accumulated. On my examinations, both before and after the explosion, I found sufficient air passing to keep the mine, under ordinary circumstances, free from gas, and in a healthy state for the men to work in. I attribute the accumulation of gas, already referred to, either to an extra quantity having been given off, between the Saturday night and Monday morning, or to a door having been neglected during that time, which allowed the air to pass by the stall without going into it. It was the duty of one of the three deceased men to see that all the doors in that part of the mine were properly closed or shut on the Saturday night; and doubtless this sad accident was due to his going into the stall in question where gas had collected, and which according to the evidence he knew had not been previously examined, and against the orders of the fireman. As already stated, each of the three deceased men were supplied with a locked safety Davy lamp. I believe the explosion was caused by the flame being forced through the gauze, either by the deceased having gone quickly into the gas, or by the horse which they were driving having forced the gas quickly upon their safety-lamps. This goes to prove how necessary it is to exercise the greatest care in using a safety-lamp, even when locked, and that whenever gas is discovered a slow but steady retreat should at once be effected.

Two accidents from breathing carburetted hydrogen gas have occurred during the year, proving fatal to one person in each case.

The first occurred on Friday, May the 18th, in a part of the Morfa Colliery, belonging to Messrs. Vivian and Sons. This colliery is situated on the south outcrop of the South Wales Coal Basin, where all the veins of coal lie at a great angle, so that unless a brattice or other partition be carried within a very short distance of the face of the coal, little or no fresh air reaches the point where the gas (if any) is exuding, as was the case in this instance, and it lodges where the men work, and of course is breathed by them. In this case the place was only driven up a very short distance from the level, where there was a large quantity of air passing, but no brattice had been put into it, and gas accumulated, which the deceased breathed, and caused his death. The cause of death was proved by a post mortem being made. At the inquest, and at the examination of the district in which it occurred, the danger attending the non-bratticing of such places was forcibly pointed out to the officials, and the discontinuance of such a system strongly recommended.

The second case, which was also proved by a post-mortem examination, occurred on Monday morning, November 26th, in the Baglan Hall Colliery, which is also situated on the south outcrop, and the coals lying at a great angle.

When I inspected the colliery after the accident, I found the quantity of air passing was so small as to be barely sufficient to keep the workings free from gas, which I pointed out to the officials of the colliery who accompanied me, and at the inquest I strongly recommended that the working of that part of the colliery should be discontinued until the ventilation was improved, which the agent undertook to do.

The deceased in this case was the fireman of the pit, and knew there was gas in the face of the place in question, but unfortunately went into it (leaving his safety-lamp behind him) for the purpose of knocking to ascertain the thickness there was to drive before effecting a communication with another place.

I believe the death of the unfortunate man was the result of his not knowing the great danger of breathing carburetted hydrogen gas.

Eleven accidents have occurred from falls of coal, and 37 from falls of stone or roof, causing the death of 49 persons, which is a decrease of eight deaths as compared with 1865.

As I have stated in previous reports, the fixing or setting of timber devolves principally upon the colliers themselves, so that, in addition to a sufficient supply of suitable pitwood, and constant and efficient supervision by the officials, constant watching and care on their part are essentially necessary to guard against such accidents. I lose no opportunity of pressing upon both the officials and colliers the great necessity of attending to the foregoing, with a view to guard against such accidents.

The total number of deaths from shaft accidents is 15, as against 17 in the previous year.

All shaft work is dangerous, and the greatest care and judgment on the part of both officials and the sinkers are necessary to guard against these accidents.

A considerable number of shafts have been and are being sunk in the South Wales district, the demand for the steam coal during the past year having been, I believe, unprecedented.

The number of deaths from miscellaneous underground accidents amounted to 27, viz., three from explosions of gunpowder, seven from accidents in engine planes, seven from trams, two from machinery, and eight from sundry causes.

The three deaths from explosions of gunpowder were caused by the powder being unexpectedly ignited by a spark or *loose* powder whilst the deceased were engaged in preparing to blast the coal or stone down.

The seven deaths on engine planes were due to the unfortunate deceased falling before the trams whilst in motion. In two cases, viz., one at the Hendrefirgan Colliery, and the other at the Gellia Cadoxton Colliery, I found the Act with regard to providing refuge stalls on the sides of self-acting and engine planes had not been complied with, and in each case, with your permission, proceedings were instituted. In the former case a fine of 3*l.* was inflicted, and in the latter only a fine of one shilling.

The other seven deaths were caused by falling before trams; and I beg to reiterate what I said in my last report with respect to such accidents.

The practice throughout almost the whole of the collieries in the Aberdare Valley is for the "door boys" (generally from 10 to 15 years of age) to travel in front of the horses hauling the full and empty trams to and from the shaft, instead of each remaining stationary at his door. Boys of such tender years are utterly incapable of performing such laborious work for 12 hours; and this I have no hesitation in stating is, in my opinion, the chief cause of the great fatality under this head. I have frequently pointed this out to colliery managers where the practice is in use, and they state that the "hauliers" (persons from 18 to 40 who are engaged in bringing the coal with horses from the workings to the bottom of the shaft) would not work without having the boys to travel with them.

Should it be neceasary for the hauliers to have boys to travel with them, such boys ought to be older and stronger than those now doing this work.

I am moreover of opinion that the plan of allowing door boys to travel with the hauliers is fraught with considerable danger, as conducing to the neglect of doors, and the consequent derangement of the ventilation.

Fourteen deaths have arisen from accidents on the surface, viz., two from machinery, and the remainder from miscellaneous causes, but principally from being crushed by trucks, &c., &c. Sections 12, 13, & 14, 23 & 24 Vict. cap. 151. apply to the two former, and which were complied with, but there are no general or special rules applicable to the latter, so that to guard against those accidents the greatest care on the part of those employed at such work is absolutely necessary.

In accordance with your instructions, proceedings were instituted against Mr. E. Richards, the manager of the Carway Colliery, Carmarthenshire, for violation of the 1st general rule of the Coal Mines Inspection Act, and a fine of 20*l.* (the full penalty) was imposed.

Although the total number of lives lost in this district during the past year amount to 120 in the coal mines and 10 in the ironstone mines, yet, when it is borne in mind that the working of many of the South Wales veins of coal is attended with great danger from their being so heavily charged with inflammable gas, and constantly liable to be given off suddenly, together with their bad roofs, it cannot, I think, be said that the results of the past year are unsatisfactory.

Ironstone Mines in the Coal Measures.

The estimated quantity of ironstone raised during the past year amounted to about 420,000 tons, and nine fatal accidents, resulting in the loss of 10 lives, have occurred, being one life lost to 42,000 tons of ironstone raised; four from falls of roof, causing the death of five persons.

The remarks made with reference to accidents from falls in the coal mines are equally applicable to falls in the ironstone mines.

Two from shaft accidents; one from trams; and on the surface one from machinery and one from trams.

Coal Mines.

With a view to guard as far as practicable against such fearful explosions as have unhappily occured in Yorkshire and Staffordshire during the past year, every possible means should be resorted to, not only to prevent the inflammable gas from escaping from the goafs or old works (parts where the coal has been extracted) on to the workmen's naked lights or safety-lamps, but also, as far as possible, to clear such goafs of gas, so that in case of a fall of stone there, or a sudden fall of the barometer, there shall be little or none to be forced out.

If such a system or principle of working coal as would always have the goafs or old works on the rise of the working faces or places (which I think practicable), with good airways maintained on the rise of such goafs, and a free communication between the two was adopted, both the foregoing (the prevention of gas passing on to the workmen's lamps, and ridding the goafs of gas,) would in a great measure be accomplished; but where the contrary is the case, *i.e.*, where the goafs or old works are below or on the lower side of the working faces or places (which is the mode generally adopted), it is difficult, from the natural tendency of the carburetted hydrogen gas to ascend, to prevent it passing up and into such working places. I have met with colliery managers who contend that the safety-lamp is intended to meet such contingencies; but when the great care requisite to see that the lamps (safety) are fit to undergo such an ordeal, and the constant attention required by those (who are for the most part engaged in hard manual labour) using them (lamps), are borne in mind, the discovery of any trifling neglect cannot, I think, be wondered at; and therefore the greatest care is incumbent upon all intrusted with the management of colleries to prevent (as far as our present knowledge of mining can do so) gas being brought in contact with the workmen's lamps.

These explosions of gas, resulting in each case in the loss of life, have come under my notice where the gas had been exploded by lamps (safety) which had been duly examined.

In one case the safety-lamp, a Davy, after the explosion, was only found to be defective by the closest examination.

In concluding this my third annual report, I would strongly and sincerely recommend all colliery owners to exercise the greatest care in selecting able, experienced, and careful persons to act as their colliery managers, and in no case to allow pecuniary considerations to weigh against the safety of the lives of those engaged in their mines.

And to the managers, I would also recommend that they give their undivided attention to the safety of the people employed under them, and in no case to allow a breach of any rule to go unnoticed. They should also exercise great care and attention in selecting overmen, firemen, and other officials, to whose judgment and care often hundreds of lives have to be entrusted; and in all mines at all fiery to introduce working with safety-lamps, and under such circumstances to disallow the firing of shots; to have properly appointed places in the fresh air, and in no case far from the bottom of the downcast shaft, with experienced and careful men at such places, for relighting the safety-lamps, and to strictly enforce a proper examination of all working places and roads leading thereto before the colliers proceed to their work, each and every morning.

I would also strongly point out to the workmen the great necessity of their exercising great and constant care in the performance of all their underground duties, especially with regard to the proper treatment of the safety-lamp, and due observance of all the colliery rules, and in no case to allow the violation of any rule which may come under their notice to pass without being duly reported to the officials in charge of the pit.

I have, &c.
THOS. E. WALES,
Inspector of Mines.

To the Right Hon. Spencer H. Walpole, M.P., &c., &c.,
Home Secretary of State, Whitehall, London.

List of the Fatal Colliery Accidents, and Loss of Life arising therefrom, in the South Wales District during the Year ended 31st of December 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1866. Jan. 2	1	Gadlys	Aberdare	Gadlys Iron Company	Fred. Williams	Collier	35	Fall of stone	–	–	1	–	–	–	–	–	–
„ 3	2	Cwmaman	Ditto	Shepherd and Evans	Chas. Proctor	Doorboy	13	Run over by trams	–	–	–	–	–	1	–	–	–
„ 6	3	Hirwain	Ditto	Hirwain Aberdare Steam Coal Company.	W. Davies	Collier	52	Fall of stone	–	–	1	–	–	–	–	–	–
„ 6	4	Mynydd-bach-y-Glo.	Swansea	Alfred Sterry	Thos. Owens	Ditto	40	Crushed by railway trucks, whilst getting timber to take down the pit (surface).	–	–	–	–	–	–	–	1	–
„ 7	5	Dunraven	Pontypridd	Thomas Joseph	Jas. Williams	Sinker	33	By carriage coming down upon him	–	–	–	–	1	–	–	–	–
„ 10	6	Worcester	Swansea	Thomas Glassbrook	Richard Phillips	Engineman	35	By trying to stop rope of hauling engine falling down the shaft (surface).	–	–	–	–	–	–	1	–	–
„ 15	7	Dowlais	Merthyr Tydvil	Guest and Co.	Morgan Davies	Labourer	22	Fall of stone	–	–	1	–	–	–	–	–	–
„ 16	8	Morfa	Swansea	Vivian and Sons	Daniel Curtis	Collier	—	Crushed by a truck on which he was riding home from the pit, under an arch (surface).	–	–	–	–	–	–	–	1	–
„ 25	9	Llancaich	Gellygaer	George Worthington	Thos. Williams	Haulier	—	Trams passing over him	–	–	–	–	–	1	–	–	–
„ 28	10	Cwm Neol	Aberdare	Powell's Steam Coal Co.	Evan Evans	Hitcher	—	Fell into sump whilst unloading timber, and was drowned.	–	–	–	–	1	–	–	–	–
„ 30	11	Cyfarthfa	Merthyr	William Crawshay	John Jones	Haulier	40	Crushed by trams	–	–	–	–	–	1	–	–	–
								Total number of deaths in January	–	–	3	–	2	3	1	2	–
Feb. 8	12	Hirwain	Aberdare	Hirwain Coal and Iron Company.	James Evans	Collier	52	Supposed to have taken a fit, and fell and injured his skull, and died from the effects	–	–	–	–	–	1	–	–	–
„ 13	13	Cwm Neol	Ditto	P. S. Coal Company	Henry Hughes David Richards	Timberman Ditto	—	Explosion of gas. These men were working at night, and it is supposed a door was left open. One of their lamps found with top off.	2	–	–	–	–	–	–	–	–
„ 15	14	Mynydd-bach-y-Glo.	Swansea	Alfred Sterry	Lewis Jones	Collier	23	Got on to trams whilst running up engine plane, and was crushed.	–	–	–	–	–	1	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1866.																	
Feb. 13	15	Llynvi Vale -	Bridgend - -	Llynvi Vale Iron Company	Isaac Williams -	Collier -	37	Fall of stone - - -	–	–	1	–	–	–	–	–	–
„ 22	16	Gadlys - -	Aberdare - -	Gadlys Iron Company -	Edward Harris -	Labourer	22	Trams on incline-plane - -	–	–	–	–	–	–	–	1	–
								Total number of deaths in February	2	–	1	–	–	2	–	1	–
Mar. 7	17	Merthyr Dare -	Aberdare - -	Rhys and Richards -	Za. Rosser -	Collier -	16	Fall of stone - - -	–	–	1	–	–	–	–	–	–
„ 10	18	Ditto -	Ditto - -	Ditto - -	—	—	—	Rope breaking whilst ascending with a horse.	–	–	–	–	1	–	–	–	–
„ 17	19	Plymouth -	Merthyr Tydfil -	Plymouth Iron Company -	Thomas Meet -	Hitcher -	—	Killed by carriage coming down upon him whilst passing through the bottom of the shaft.	–	–	–	–	–	1	–	–	–
„ 17	20	Cyfarthfa -	Merthyr Tydfil -	W. Crawshay - -	Thomas Morris -	Sinker -	20	Fall of bucket (loaded) whilst ascending the Castle sinking shaft.	–	–	–	–	1	–	–	–	–
„ 17	21	Llettyshenkin -	Aberdare - -	Llettyshenkin Coal Co. -	John Griffiths -	Smith -	48	Went down to shoe a horse in the "6-feet vein," and fell in getting into carriage to ascend, fell from "6-feet" to "9-feet," 29 yards, 2 feet.	–	–	–	–	1	1	–	–	–
„ 17	22	Nantmelyn -	Aberdare - -	Mordecai Jones - -	John Richards -	Shot-firer	—	Killed by the shot going off, and blowing a stone, or piece of coal, against deceased's head.	–	–	–	–	–	1	–	–	–
„ 28	23	Morfa - -	Taibach -	Vivian and Sons - -	John Lewis	Collier -	21	Fall of stone from roof - - -	–	–	1	–	–	–	–	–	–
„ 28	24	Cwm Avon -	Ditto - -	Copper Mines - -	David Williams -	Ditto -	40	Ditto - - -	–	–	1	–	–	–	–	–	–
„ 31	25	Brithdir - -	Neath - -	Dynevor Coal Company -	Richd. Lowering	Ditto -	51	Burnt, and died from effects -	1	–	–	–	–	–	–	–	–
„ 31	26	Bute Pit -	Aberdare - -	Hirwain Coal and Iron Co.	David Griffiths -	Ditto -	43	Fall of coal - - -	–	1	–	–	–	–	–	–	–
								Total number of deaths in March	1	1	3	–	3	2	–	–	–
April 2	27	Great Western	Pontypridd -	Great Western Coal Co. -	Morris Bryant -	Haulier -	15	Killed by trams (on surface) -	–	–	–	–	–	–	–	1	–
„ 3	28	Newbridge -	Pontypridd -	Richard Rowland -	Rosser Rees -	Collier -	16	Fall of stone from roof - - -	–	–	1	–	–	–	–	–	–
„ 14	29	Swan - -	Briton Ferry -	Thomas Jenkins - -	John Jenkins -	Ditto -	15	Ditto - - -	–	–	1	–	–	–	–	–	–
„ 14	30	Tondû - -	Bridgend - -	Brogden and Sons - -	John Thomas -	Ditto -	18	Ditto - - -	–	–	1	–	–	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1866. April 16	31	Abergwawr	Aberdare	Powell's Steam Coal Co.	Henry Pugh	Collier	13	Fall of stone from roof	–	–	1	–	–	–	–	–	–
„ 17	32	Dowlais	Merthyr	Guest and Company	Jane Jenkins	Oil girl	14	By getting entangled with carriage top of pit.	–	–	–	–	–	–	–	1	–
„ 17	33	Lower Duffryn	Aberdare	P. S. Coal Company	Rees Davies	Collier	12	Fall of coal	–	1	–	–	–	–	–	–	–
					Henry Pugh	—	—	Ditto	–	1	–	–	–	–	–	–	–
„ 22	34	Hirwain	Aberdare	Hirwain Coal and Iron Co.	Isaac Bowen	Labourer	—	Crushed by trucks	–	–	–	–	–	–	–	1	–
„ 23	35	Tyr Cenol	Swansea	Williams, Foster, and Co.	John Richards	Labourer	17	Run over by trams on engine-plane	–	–	–	–	–	1	–	–	–
„ 27	36	Coedcae	Pontypridd	Coedcae Coal Company	John Jenkins	Haulier	—	Fall of coal	–	1	–	–	–	–	–	–	–
„ 27	37	Lantwit	Llantrissant	Thomas Powell	Morgan Dyer	Collier	26	Fall of stone	–	–	1	–	–	–	–	–	–
„ 28	38	Forchaman	Aberdare	P. S. Coal Company	W. Elswick	Ditto	12	Run over by trams	–	–	–	–	–	1	–	–	–
„ 31	39	Pontyfynon	Llanelly	D. Lloyd and Son	W. Watkins	Ditto	—	Explosion of gas	1	–	–	–	–	–	–	–	–
								Total number of deaths in April	1	3	5	–	–	2	–	3	–
May 1	40	Blaengwawr	Aberdare	David Davies	David Herbert	Engineer	21	Got entangled in machinery	–	–	–	–	–	1	–	–	–
„ 2	41	Vochrin	Dowlais	Guest and Company	W. Davies	Collier	48	Fall of stone	–	–	1	–	–	–	–	–	–
„ 8	42	Bwllfa	Aberdare	Bwllfa Coal Company	John Rees	Ditto	19	Ditto	–	–	1	–	–	–	–	–	–
„ 18	43	Morfa	Tai'bach	Vivian and Sons	W. Eastman	Engineer	16	Got entangled in machinery	–	–	–	–	–	1	–	–	–
„ 18	44	Morfa	Tai'bach	Vivian and Sons	David Evans	Collier	25	Suffocated. (See remarks in body of Report.)	–	–	–	1	–	–	–	–	–
„ 21	45	Pentre	Swansea	Vivian and Sons	John Morris	Hitcher	15	Crushed between trams	–	–	–	–	–	1	–	–	–
„ 26	46	Vochrin	Dowlais	Guest and Company	Thomas Jones	Haulier	42	Killed by carriage; mistake in knocking.	–	–	–	–	–	1	–	–	–
					Ellis Lewis	Hitcher	23	Ditto	–	–	–	–	–	1	–	–	–
„ 29	47	Park	Pontypridd	David Davis and Company	David Hughes	Collier	19	Fall of roof	–	–	1	–	–	–	–	–	–
„ 30	48	Tondû	Bridgend	Brogden and Sons	Henry Edwards	Haulier	18	Ditto	–	–	1	–	–	–	–	–	–
„ 31	49	Ystalyfera	Bridgend	Ystalyfera Iron Company	W. Williams	Collier	18	Ditto	–	–	1	–	–	–	–	–	–
								Total number of deaths in May	–	–	5	1	–	5	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1866. June 1	50	Gadlys	Aberdare	Gadlys Iron Company	Joseph Jenkins	Labourer	23	Crushed by waggons (surface)	–	–	–	–	–	–	–	1	–
„ 3	51	Tylecoch	Pontypridd	Thos. Jones and Co.	James Williams	Sinker	26	Was going down with another on the Sunday morning to clear the water in bottom, and fell from the bucket.	–	–	–	–	1	–	–	–	–
„ 4	52	Hirwain	Aberdare	Hirwain Coal and Iron Company.	John Jenkins	Haulier	14	Deceased was not employed by the Company, but was going down to seek for work, and fell from cage whilst descending. Another person was in the carriage.	–	–	–	–	1	–	–	–	–
„ 7	53	Navigation	Aberdare	Nixon and Co.	John Evans	Collier	46	Fall of stone	–	–	1	–	–	–	–	–	–
„ 8	54	Yniscedwyn	Swansea	Yniscedwyn Iron Company	David Jones	Ditto	50	Ditto	–	–	1	–	–	–	–	–	–
„ 8	55	Lantwit	Pontypridd	Thomas Powell	Thos. Matthews	Ditto	14	Ditto	–	–	1	–	–	–	–	–	–
„ 12	56	Dowlais	Dowlais	Guest and Co.	David Evans	Doorboy	12	Fall of roof	–	–	1	–	–	–	–	–	–
—	57	Mynydd-bach-y-Glo.	Swansea	Alfred Sterry	Philip Davis	Collier	—	Ditto	–	–	1	–	–	–	–	–	–
„ 21	58	Llwynpia	Pontypridd	Glamorgan Coal Company	W. Gwynne	- -	13	Entangled with machinery	–	–	–	–	–	–	1	–	–
„ 23	59	Middle Duffryn	Aberdare	P. S. C. Company	David Thomas	Labourer	53	Fall of stone	–	–	1	–	–	–	–	–	–
„ 26	60	Cethin	Merthyr Tydfil	W. Crawshay	Timothy Mach	Hitcher	30	From falling from "4-feet" to bottom of shaft: this is the second fatal accident.	–	–	–	–	1	–	–	–	–
„ 29	61	Werfa	Aberdare	Heath, Evans, and Co.	John Thomas	Rider	28	Fell from truck	–	–	–	–	–	–	–	1	–
								Total number of deaths in June	–	–	6	–	3	–	1	2	–
July 14	62	Cwm Neol	Aberdare	Powell's Steam Coal Co.	Thomas Brown	Collier	—	Fall of stone	–	–	1	–	–	–	–	–	–
„ 24	63	Llynvi Vale	Bridgend	Llynvi Vale Iron Co.	Henry Edwards	Collier	60	Fall of stone	–	–	1	–	–	–	–	–	–
„ 27	64	Plymouth	Merthyr	Plymouth Iron Company	Samuel John	Collier	60	He was injured by a fall of stone on June 20th; began work, but died July 27th.	–	–	1	–	–	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1866. July 30	65	Bonville Ct.	Tenby	Myers and Co.	W. Parsell	Engineer	45	Fell down engine-shaft whilst engaged, with another man, at repairs.	–	–	–	–	1	–	–	–	–
								Total number of deaths in July	–	–	3	–	1	–	–	–	–
Aug. 3	66	Cwmaman	Aberdare	Shepherd and Evans	David Powell	Haulier	13	Fell under trams	–	–	–	–	–	1	–	–	–
,, 16	67	Abernant	Aberdare	Fothergill and Co.	John Thomas	Collier	33	Fall of stone	–	–	1	–	–	–	–	–	–
,, 20	68	Morfa	Tai'bach	Vivian and Sons	Thomas Bartle	Ditto	28	Killed on engine-plane	–	–	–	–	–	1	–	–	–
,, 21	69	Tylacoch	Pontypridd	Thomas Jones	W. Bedlington	Mining Engineer.	57	Explosion of gas	–	–	–	–	–	–	–	–	–
					Eno Francis	Contractor	40	Ditto (See remarks in body of Report.)	2	–	–	–	–	–	–	–	–
,, 21	70	Wt. Lantwit	Pontypridd	T. Powell	David Francis	Collier	—	Shot went off when stemming hole	–	–	–	–	–	1	–	–	–
,, 24	71	Cwm Neol	Aberdare	P. S. C. Company	George William	Haulier	—	Run over by trams	–	–	–	–	–	1	–	–	–
,, 30	72	Landore	Swansea	Richards and Glassbrook	Jenkin Philips	Collier	40	Fall of coal	–	1	–	–	–	–	–	–	–
								Total number of deaths in August	2	1	1	–	–	4	–	–	–
Sep. 7	73	Mynydd-bach-y-Glo.	Swansea	Alfred Sterry	Joseph Davies	Signal-boy	14	Killed by riding on pump-rods on engine-plane. Deceased was employed as signal-boy in the night turn.	–	–	–	–	–	1	–	–	–
,, 10	74	Hook	Haverfordwest	Hook Colliery Company	Thos. Jenkins	Labourer	35	Fell down air shaft	–	–	–	–	1	–	–	–	–
,, 11	75	Navigation	Aberdare	Nixon and Co.	David Lewis	Collier	28	Fall of stone	–	–	1	–	–	–	–	–	–
,, 15	76	Morfa	Tai'bach	Vivian and Sons	John George	Collier	50	Killed on engine-plane	–	–	–	–	–	1	–	–	–
,, 15	77	Bwllfa	Aberdare	Bwllfa Coal Company	Thomas King	Ditto	15	Explosion of gas. (See remarks in body of Report).	1	–	–	–	–	–	–	–	–
,, 20	78	Bwllfa	Aberdare	Bwllfa Coal Company	William Lloyd	Labourer	55	-	–	–	–	–	–	–	–	1	–
,, 22	79	Tondû	Bridgend	Brogden and Sons	John Griffiths	Collier	18	Fall of stone	–	–	1	–	–	–	–	–	–
,, 28	80	Abernant	Aberdare	Fothergill and Company	W. Richards	Ditto	19	Fall of coal	–	1	–	–	–	–	–	–	–
								Total number of deaths in Septr.	1	1	2	–	1	2	–	1	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
Oct. 1	81	Cyfarthfa -	Merthyr Tydfil -	W. Crawshay - - -	John Jones -	Haulier -	14	Fell under trams - - - -	–	–	–	–	–	1	–	–	–
,, 3	82	Dinas - -	Pontypridd -	Col. Hunt - - -	W. Hobson -	Sinker -	25	Fall of stone from side of sinking shaft.	–	–	–	–	1	–	–	–	–
,, 8	83	Hendreforgan -	Swansea - -	Alex. Bain - - -	Morris Llewellyn	Collier -	13	Killed by trams on engine plane -	–	–	–	–	–	1	–	–	–
,, 9	84	Blaengwawr -	Aberdare - -	David Davies - - -	Thomas Hughes	Ditto -	52	Killed by firing a shot. Deceased was engaged to fire the shots for three or four stalls, and it is supposed the gunpowder had been ignited by a little loose powder in the paper.	–	–	–	–	–	1	–	–	–
,, 11	85	Bwllfa - -	Ditto - -	Bwllfa Coal Company -	Richard Eynon -	Collier -	15	Fall of coal - - - - -	–	1	–	–	–	–	–	–	–
,, 13	86	Abernant -	Ditto - -	Fothergill and Co. - -	John Jones -	Haulier -	18	Fell before empty trams in going down deep heading.	–	–	–	–	–	1	–	–	–
,, 16	87	Werfa - -	Ditto -	Heath, Evans, and Co. -	William Simons	Banksman	25	Fell off trucks on surface incline plane.	–	–	–	–	–	–	–	1	–
,, ,,	88	Gwenraeth -	Llanelly - -	D. Watney - - -	Henry Richards	Collier -	13	Explosion of gas - - - -	2	–	–	–	–	–	–	–	–
					Thomas Griffiths	Ditto -	—	Ditto - - - - - (See remarks in body of Report.)									
,, 24	89	Navigation -	Aberdare -	Nixon and Co. - -	Thomas Jenkins	Door boy	15	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
,, 27	90	Amman - -	Llanelly - -	Amman Iron Company -	John Evans -	Signal boy	13	Killed on engine plane - - -	–	–	–	–	–	1	–	–	–
,, 29	91	Werfa - -	Aberdare -	Heath, Evans, and Co. -	William Davies	Collier -	40	Killed on level or engine plane -	–	–	–	–	–	1	–	–	–
								Total number of deaths in October.	2	1	1	–	1	6	–	1	–
Nov. 2	92	Pennydarron -	Merthyr - -	Dowlais Iron Company -	John Davies -	Collier -	20	Fall of coal - - - - -	–	1	–	–	–	–	–	–	–
,, 6	93	Aberdare -	Aberdare -	Aberdare Coal Company -	Thomas Thomas	Ditto -	19	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
,, ,,	94	Abergwawr -	Ditto - -	P. D. S. Coal Company -	David Jones -	Haulier -	21	Trucks on surface - - -	–	–	–	–	–	–	–	1	–
,, ,,	95	Navigation -	Ditto - -	Nixon and Co. - -	William Evans -	Ditto -	13	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
,, 7	96	Cwmaman -	Ditto - -	Shepherd and Evans -	Daniel Edwards	Collier -	21	Ditto - - - - -	–	–	1	–	–	–	–	–	–
,, ,,	97	High Duffryn -	Ditto - -	P. S. C. Co. - - -	Thomas Hopkins	Ditto -	28	Ditto - - - - -	–	–	1	–	–	–	–	–	–
,, ,,	98	Tondû - -	Bridgend - -	Brogden and Sons - -	John Lewis -	Ditto -	40	Ditto - - - - -	–	–	1	–	–	–	–	–	–

List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shaft.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1866. Nov. 7	99	Birchgrove -	Swansea - -	Pegg and Co. - -	David Thomas -	Collier -	16	Fall of coal - - - - -	–	1	–	–	–	–	–	–	–
„ 9	100	Gadlys - -	Aberdare - -	Gadlys Iron Company -	Ann Butler -	Oiler -	—	Fell before trams at surface -	–	–	–	–	–	–	–	1	–
„ „	101	Dowlais - -	Dowlais - -	Guest and Co. - -	John Evans -	Collier -	50	Explosion of gas; there were other 3 injured. *See* Report.	1	–	–	–	–	–	–	–	–
„ 10	102	Abercwmboy -	Aberdare - -	David Davis and Sons -	Simeon Samuel -	Over-man	46	Killed by crossing bottom of shaft. Deceased could have crossed without going under the shaft.	–	–	–	–	1	–	–	–	–
„ „	103	Llynvi Vale -	Bridgend -	Llynvi Vale Company -	David Jones -	Collier -	60	Fall of stone - - - - -	–	–	1	–	–	–	–	–	–
„ 22	104	Deep Duffryn -	Aberdare - -	Nixon and Co. - -	Charles Hall -	Ditto -	20	Ditto - - - - - -	–	–	1	–	–	–	–	–	–
„ 25	105	Cwm Neol -	Ditto - -	P. S. C. Company - -	John Thomas -	Pit carpenter.	33	Fell from top of carriage whilst ascending in company with 2 more persons.	–	–	–	–	1	–	–	–	–
„ 26	106	Baglan Hall -	Briton Ferry -	Baglan Hall Company -	David Roberts -	Fireman -	40	Suffocated by carburetted hydrogen gas.	–	–	–	1	–	–	–	–	–
„ 28	107	Gadlys -	Aberdare - -	Gadlys Iron Company -	John Lewis -	Collier -	44	Fall of coal - - - -	–	1	–	–	–	–	–	–	–
								Total number of deaths in November	1	3	7	1	2	–	–	2	–
Dec. 1	108	Rhondda Merthyr	Pontypridd -	E. Lewis - -	Thomas Jenkins	Ditto -	45	Fall of stone - - - -	–	–	1	–	–	–	–	–	–
„ 8	109	Ferndale -	Ditto - -	David Davies and Sons -	Thomas Devon -	Sinker -	35	Fell down shaft whilst walling it -	–	–	–	–	1	–	–	–	–
„ 12	410	Lower Duffryn	Aberdare - -	P. S. Coal Company -	William Gibby -	Collier -	30	Killed by a coal falling from ascending carriage whilst he was getting into the carriage to ascend. Deceased was injured on the 5th and died on the 12th.	–	–	–	–	1	–	–	–	–
„ „	111	Gelha Cadoxton	Neath - -	Evans and Bevan -	David Rees -	Labourer	30	Killed on engine plane - -	–	–	–	–	–	1	–	–	–
„ 21	112	Darydire -	Merthyr - -	Samuel Thomas - -	W. Rees - -	Collier -	14	Fall of coal - - -	1	1	–	–	–	–	–	–	–
„ 24	113	Abercwmboy -	Aberdare	David Davies and Sons -	W. Lightfoot -	Haulier -	25	Explosion of gas - - - -	1	–	–	–	–	–	–	–	–
					Richard Harris -	Labourer	27	Ditto - - - - - -	1	–	–	–	–	–	–	–	–
					Eben. Morris	Ditto -	19	Ditto - - - - - -	1	–	–	–	–	–	–	–	–
								Total number of deaths in December	3	1	1	–	2	1	–	–	–

LIST of the FATAL IRONSTONE MINE ACCIDENTS, and LOSS of LIFE arising therefrom, in the SOUTH WALES DISTRICT, during the Year ended 31st December 1866.

Date.	No. of Accidents.	Name of Ironstone Mine.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Underground.						On Surface.		
									Explosions.	Falls of Coal.	Falls of Stone.	Suffocation.	In Shafts.	Miscellaneous.	Machinery.	Miscellaneous.	Boilers bursting.
1866. May 8	1	Tondû	Bridgend	Brogden and Sons	Thomas Lewis	Miner	22	Fall of roof	–	–	1	–	–	–	–	–	–
„ 10	2	Cyfartfa	Merthyr	W. Crawshay	Jno. Jones	Ditto	20	Ditto	–	–	1	–	–	–	–	–	–
								Total number of deaths in May	–	–	2	–	–	–	–	–	–
June 7	3	Dowlais	Ditto	Guest & Co.	Thomas Evans	Hitcher	30	Casting fell down shaft	–	–	–	–	1	–	–	–	–
								Total number of deaths in June	–	–	–	–	1	–	–	–	–
July 10	4	Ditto	Ditto	Ditto	Jno. Williams	Miner	52	Fall of stone	–	–	1	–	–	–	–	–	–
„ 31	5	Ditto	Ditto	Ditto	Jno. Davies	Stoker	24	Got entangled with machinery	–	–	–	–	–	–	1	–	–
								Total number of deaths in July	–	–	1	–	–	–	1	–	–
Aug. 15	6	Ditto	Ditto	Ditto	Jason Thomas	Door boy	12	Killed by trams running over him	–	–	–	–	–	–	1	–	–
								Total number of deaths in August	–	–	–	–	–	–	1	–	–
Sept. 11	7	Ditto	Ditto	Ditto	W. Philips	Miner	33	Fall of stone	–	–	1	–	–	–	–	–	–
					Jno. Thomas	Ditto	30	Ditto	–	–	1	–	–	–	–	–	–
								Total number of deaths in September	–	–	2	–	–	–	–	–	–
Oct. 25	8	Ditto	Ditto	Ditto	Thos. Buxton, jr.	Sinker	25	Fell down air pit	–	–	–	–	1	–	–	–	.
								Total number of deaths in October	–	–	–	–	1	–	–	–	–
Dec. 24	9	Cyfarthfa	Ditto	W. Crawshay		Labourer	13	Run over by trams	–	–	–	–	–	–	–	1	–
								Total number of deaths in December	–	–	–	–	–	–	–	1	–

Mr. Moore's Report.

REPORT of the INSPECTOR of MINES and COLLIERIES in the EASTERN DISTRICT OF SCOTLAND, for the Year ended 31st December 1866.—By RALPH MOORE, Esq.

SIR, Glasgow, February 28, 1867.

I HAVE the honour to submit my annual Report for the year ended 31st December 1866, with the accompanying lists of fatal accidents and loss of life thereby, and the usual summaries.

It is satisfactory to find that the fatal accidents and loss of life are fewer than those of the year 1865.

	1865.	1866.
In coal mines the deaths by explosions were	5	5
,, ,, falls of roof and coal	11	17
,, ,, shafts	7	14
,, ,, miscellaneous, under ground	6	9
,, ,, above ground	3	2
	32	47

These accidents have been duly reported by me to the Lord Advocate for Scotland who has not seen fit to order any prosecution.

No fatal accident has occurred from overwinding, or from breakage of ropes, or chains, or from boilers having burst in any mines embraced in the statute.

The diminution in the number of fatal accidents and loss of life thereby is creditable alike to those having the management and care of mines and to the various classes of workmen employed therein. Without the steady co-operation on the part of all concerned the minimum loss of life will not be reached.

I have constantly urged the adoption of the most approved modes of working, and machinery, and the establishment and careful observance of suitable "Special" rules as essential means of preventing accidents.

The owners of Clackmannan and Alloa Collieries having objected to the Lanarkshire special rules, which were proposed to be substituted for the rules in force at those collieries, the matter was referred to arbitration in terms of the statute. It was thought desirable that the following rule should (amongst others) be established for an examination of the pit at the commencement of every shaft, viz.:—

> "Colliers are expressly forbidden to proceed towards or into any working place at "the commencement of any shift until it shall have been intimated to them by the "fireman, or underground manager, or other person acting as such for the time, "that the working places have been examined and are apparently safe to be "entered. Till such intimation of the apparent safety of the working places shall "have been made colliers shall either remain at the pithead, or at some other place "assigned to them for the purpose; if no such place shall have been assigned to "them colliers shall always understand that the pithead is the proper place at "which they are required to wait the requisite information."

Those collieries give off no firedamp, and it was urged by the owners that no such examination was called for. The arbiter, Mr. William Marshall, mining engineer, Edinburgh, who was selected from the five nominees of the owners, decided that there was no need for any alteration in the existing rules, and they accordingly remain unaltered.

There are many contingencies occurring in a colliery where no firedamp exists, which call for the examination above referred to, and I am endeavouring to obtain its adoption in all new collieries, but it is wanting in many of the Fife and Midlothian works where no firedamp exists, and where parties object to its insertion the disagreeable alternative of arbitration is the only mode of relieving myself of the responsibility of agreeing to the establishment, or continuance, of defective rules.

I have again to repeat that this rule might with great benefit be made a "General" rule, and others of the "Special" rules ought also, in my opinion, to be "General" rules, such as providing for the propping of the places, contained in the North of England regulations; those requiring the use of self-acting wickets at the surface, and gates on mouthings or openings into shafts; and the presence of onsetters and pitheadmen when workmen are ascending or descending. A comparison of the various "Special" rules of all the districts would show that many of them are common to all districts, and of such the most approved should be made "General" rules and applicable to all collieries.

I have no reason to doubt that the statute as to the education of boys employed underground is, upon the whole, well attended to.

I estimate that 21,200 men were employed in this district in and about the coal mines last year, and that the quantity of coal raised was 6,100,000 tons, one half of which is raised by twenty mine owners. This was rather less than the preceding year. The coal trade was good, and employment plentiful; but owing to partial strikes, and the men working irregularly, the output in Lanarkshire fell short of former years.

In connection with the number of men employed in my district I may mention, that in consequence of the demand for men, a number of Cornish tin and copper miners came from Cornwall to work in the coal mines; and it is satisfactory to add that although they have been working steadily for some months, no fatal accident has occurred among them.

The fearful loss of live by the great explosions in Barnsley and in Staffordshire during the month of December stirred up the nation to inquire if anything could be done to prevent or lessen such catastrophes in future, and whether increased Government inspection might not tend to that end.

The statistics of Belgian mines show that the annual loss of life per thousand men employed is less than in English mines, and it has been urged that the favourable result is in consequence of the greater amount of Government interference in that country.

But such statistics of themselves afford no certain criteria of the success of the means used to prevent accidents, or of the benefit to be derived from Government inspection, for in Scotland, where firedamp is not so general as in England, I think it will be found that the death-rate is less than in Belgium.

The latest statistics I have, are those for 1851 and 1852.

During these years 54,000 persons were employed in Belgium, they raised 5,053,196 tons of coal; and the loss of life was in 1851, 121, and in 1852, 263; the great increase in the latter year arising out of two great explosions by which 104 lives were lost.

Compared with Scotch mines they stand thus—

	Loss of Life per 1,000 men employed.	Tons of Coal raised per Life lost.
Scotland, 1866	1·56	179,621
Eastern district of Scotland	1·51	190,625
Belgium, 1851	2·24	41,762
Belgium, 1852	4·87	18,835
Yorkshire, 1865	1·57	169,091
* „ 1866	12·23	22,235

The Belgian mines may be less dangerous than those in England, where the fatality is greater, and the favourable result may be owing to this circumstance more than to the amount of Government inspection. If we take the tons of coal raised per life lost, the comparison is in favour of the English mines; for even in 1866, which includes the Oaks explosion, Yorkshire raised more coals per life lost than Belgium did in 1852. Of course, in any comparison as to the number of tons of coal raised per life lost much depends upon the nature of the seam of coal worked, and the various circumstances connected with it, and I have no knowledge of the Belgian collieries.

But this is the great problem to be solved, as far as the nation is concerned,—how to raise the greatest quantity of coal with the least loss of life?—for there never will be a time when a hundred million tons of coal will be raised without some loss of life.

I entertain the opinion that the greatest amount of coal will be raised with the least loss of life where the most improved modes of mining are adopted (other things being equal) and the best regulations enforced, and that to leave the mine owner as

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* Great explosion at Oaks Colliery.

unfettered as possible, and with the entire responsibility upon him, is the way by which improvements will be most readily introduced.

There will always be some mines worse managed than others in the same district. The present amount of inspection reaches these, by the inspector securing the introduction of the best "Special" rules, and urging the adoption of the most improved modes of working and ventilating, and of the best appliances for safety which he sees going on in a widely extended district.

The General and Special rules form a compact between the mine owner and the men working in his mine. It is the duty of the mine owner to provide the best arrangements for the miner's safety, where the men have no control, and it is equally the duty of the miner, as an intelligent man, and in a fair and honest way, to fulfil his part by strictly adhering to the regulations and duties which by the special rules he undertakes, a part of which is that he should apprize the owner of any fault which he may discover in the arrangements, and, for example, any miner wilfully working in a badly ventilated pit is virtually aiding the owner to violate those laws which Government has enacted for his own good.

The undertaking by Government of anything more than the present amount of inspection would I fear be a step in the wrong direction, as tending to remove the power and the responsibility from the shoulders of those on whom it should fall.

In my report for 1865 I noticed some lawsuits where juries had awarded compensation to the relatives of persons killed. During last year Mrs. Wilson, the mother of a young man who was killed by an explosion of fire-damp, in 1863, in Messrs. Merry and Cunninghame's pit at Haugh-head, near Hamilton, sued that firm for damages for the loss of her son, and a jury awarded her 100*l.* The defenders applied for and got a new trial in January last, but the jury again gave a verdict in her favour for 100*l.*

The facility with which civil actions are got up in the Court of Session against mine owners for compensation by workmen injured, or by the relatives of those who have been killed, has enabled many cases to be taken before a jury which would not otherwise have been heard of.

Upon the whole I believe the effect of this litigation has been beneficial; it has made the mine owner more careful to have everything in good order so as to avoid law proceedings, because, if he is taken into Court, whether he is blameable or not, or whether he gets a verdict in his favour or not, whatever be the issue, the defender (the mine owner) has at least to pay his own costs, the pursuer (the miner) being unable to pay them, or even his own. On the other hand, these proceedings are always vexatious, and tend to disturb the kindly feeling which ought to subsist between employer and employed.

I have, &c.
RALPH MOORE,
Inspector of Coal Mines.

The Right Honourable S. H. Walpole,
&c. &c. &c.

LOSS OF LIFE in COAL and IRONSTONE MINES.

Year.	Explosions.	Falls.	Shafts.	Miscellaneous.	Total.
1862 -	5	35	12	1	53
1863 -	3	29	12	4	48
1864 -	1	25	8	5	39
1865 -	5	21	15	11	52
1866 -	5	12	9	8	38

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS OF LIFE arising therefrom, in COAL and IRONSTONE MINES, in the EAST of SCOTLAND DISTRICT, during the Year ended December 31, 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866. Jan. 3	1	Motherwell	Wishau	John Watson, junior	Archd. Coats	Collier	—	Explosion of fire-damp in stables. The pit had been shut up for a month to smother out a fire. It was opened up, and air on for 30 hours before accident; but stables, which deceased were cleaning out, had not been examined.	1	–	–	–	–	1
					Andrew Gold	Ditto	—		1	–	–	–	–	1
" 31	2	Morningside	Ditto	Shotts Iron Company	Thomas Marshal	Ditto	57	Choke damp from an old working	–	–	–	1	–	1
Feb. 1	3	Glespin	Douglas	James Swan	James Inglis	Ditto	60	Squeezed by cage. His tub had got off the cage rails, and some one pulled the bell while he was lifting it on, and the engine man raised the cage, and squeezed him against door.	–	–	–	1	–	1
" 10	4	Greenfield	Hamilton	Hamilton Coal Company	William Docherty	Furnaceman	70	He had fallen from the main coal, where he worked, to the splint coal, and his body was found there.	–	–	1	–	–	1
" 15	5	Stevenson	Holytown	Stevenson Coal Company	Pat. McAuley	Collier	23	Fall of roof at face	–	1	–	–	–	1
" 20	6	Cuttlehill	Dunfermline	Henderson and Wallace	John Park	Reelsman	22	Fall of roof	–	1	–	–	–	1
Apr. 2	7	Clunie	Ditto	W. and A. Goodal	William Clark	Manager	—	Fell from a scaffold six feet off ground.	–	–	–	–	1	1
May 17	8	Haughhead	Hamilton	Merry and Cunninghame	William Barrie	Drawer	15	Explosion of fire-damp	1	–	–	–	–	1
" 19	9	Skellyton	Ditto	Hamilton and McCulloch	James Wardrop	Ditto	19	Crushed by tubs running over him on incline.	–	–	–	1	–	1
" 29	10	Lassodie	Dunfermline	Lassodie Coal Company	James Terris James Houston	Collier	20	Fall of stones out of shaft side	–	–	2	–	–	2
July 10	11	Kippsbyre	Airdrie	Robertson and Eddie	E. Donolly	Drawer	16	Explosion. The lad had gone into a place standing "up-stoop" with gas in it.	1	–	–	–	–	1
" 11	12	Hill of Beath	Dunfermline	Ord Adams	W. Erskene	Ditto	13	Crushed by tubs	–	–	–	1	–	1
" 18	13	Coltness	Wishaw	Coltness Iron Company	R. Sneeldon	Collier	25	Fall of roof while removing pillars	–	1	–	–	–	1
" 20	14	Capeldrae	Lochgelly	Robert Aytoun	W. Farme	-	4	This child was going with his father's dinner, and fell in among machinery.	–	–	–	–	1	1

List of Fatal Accidents in Coal and Ironstone Mines—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1866. Aug. 2	15	Motherwell	Wishaw	John Watson, junior	R. McDougal	Labourer	—	Killed by crane running amain, and the handle striking him.	–	–	–	–	1	1
„ 6	16	Wellwood	Dunfermline	Thos. Spowart and Co.	James Thomson	Collier	42	Fall of roof	–	1	–	–	–	1
„ 29	17	Sunnyside	Wishaw	Archibald Russel	R. Stark	Ditto	45	Fall of roof while removing pillars	–	1	–	–	–	1
Sept. 13	18	Eliza Pit	Lochgelly	Lochgelly Iron Company	M. Power	Ditto	45	Fall of roof	–	1	–	–	–	1
„ 15	19	Cleugh	Wilstontoun	William Darling	M. Morgan	Miner	—	Fall of roof	–	1	–	–	–	1
Oct. 16	20	Pather	Wishaw	Boyd and Spencer	R. Robertson	Driver	20	Found dead under his loaded tub	–	–	–	1	–	1
„ 19	21	Chapelhall	Airdrie	Monkland Iron Company	James Smith	Joiner	45	He was taking measurements at the pit-mouth, and incautiously leaning over, was struck by the descending cage.	–	–	1	–	–	1
Nov. 29	22	Hall Pit Shotts	Wishaw	Shotts Iron Company	James Glencorse	Collier	45	Fall of roof at face	–	1	–	–	–	1
„ 30	23	Wishaw No. 7 Pit.	Wishaw	Wishaw Iron Company	Hugh Boyd	Ditto	30	Fall of roof	–	1	–	–	–	1
					John Hitchin	Ditto	23		–	1	–	–	–	1
„ 24	24	Braidhurst	Motherwell	Gavin Addie	David Millar	Fireman	—	Explosion of fire-damp	1	–	–	–	–	1
„ 27	25	Woodside	Hamilton	James Smith and Son	John Currie	Miner	46	A piece of wood was being sent to him on a handline; the knot slipped, and the wood fell and struck him on the head.	–	–	1	–	–	1
Dec. 1	26	Cuttlehill	Dunfermline	Henderson and Wallace	Wm. Brand	Drawer	16	A pick fell on his head while he was ascending; cage not covered.	–	–	1	–	–	1
„ 7	27	Stonecraigs	Coltness	Coltness Iron Company	J. McCormick	Collier	38	Fall of coal	–	1	–	–	–	1
„ 15	28	Cleland	Holytown	Robert Stewart	W. Adams	Redsman	34	He was repairing slides, when by some mistake in signals the engineman raised the cage, and he fell off.	–	–	1	–	–	1
„ 26	29	Alloa	Alloa	Alloa Coal Company	Allan Dawson	Drawer	15	He was in a tub, striking his horse; the horse ran off and overturned the tub above him, squeezing his neck. He only survived an hour.	–	–	–	1	–	1
								Totals	5	11	7	6	3	32

List of Fatal Accidents in Coal and Ironstone Mines—*continued.*

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
					IRONSTONE MINES.									
1866. Feb. 26	1	Stand	Airdrie	James Smithers and Co.	Bridget Mechan	Labourer	22	Fell down pit after a tub	–	–	1	–	–	1
Apr. 3	2	Boghead	Bathgate	James Russel and Son	R. Murray	Sinker	—	Engine got out of gear and they fell to the bottom.	–	–	–	1	–	1
					James Brash	Ditto	—		–	–	–	1	–	1
May 3	3	Drumgray	Airdrie	Drumgray Coal Company	M. Garallie	Woman	26	Stumbled in stepping off windlass platform and fell down pit.	–	–	1	–	–	–
June 3	4	Polkemmet	Bathgate	Shotts Iron Company	A. Marshal	Pitheadman	31	Fell off a wall	–	–	–	–	1	–
Nov. 28	5	Fauldhouse	Whetburn	Wm. Dixon	R. Whitefield	Drawer	15	Fall of roof in road	–	1	–	–	–	–
								Totals	–	1	2	2	1	6

Mr. Alexander's Report.

REPORT on the INSPECTION of MINES in the WESTERN DISTRICT OF SCOTLAND, for the Year ended 31st December 1866.—By WILLIAM ALEXANDER, Esq.

SIR, Glasgow, February 27, 1867.

IN terms of the statute 23 & 24 Vict. c. 151. s. 27. I have the honour to lay before you my eleventh annual report upon the mines and collieries in the West of Scotland.

In consequence of the frequent interruptions to labour which take place throughout the collieries situated in this mineral field, it seems desirable that some explanatory reason should be offered as to the cause.

Coal, being of importance in nearly every branch of manufacture, is to a considerable extent affected in value by the commercial changes which are constantly taking place. In some mining localities where the owners are principally engaged in the coal trade these changes are scarcely appreciable, but in districts such as this where apparently there are two distinct mining interests, coal and iron, they are more frequent and less uniform. For example, at the commencement of the year the price of pig iron was upwards of 30 per cent. higher than it was six months after, and during that time the wages of under-ground workmen were nearly equal. If during the time that high prices were obtained the maker paid at a corresponding rate for the raw materials, it follows that under a falling market, unless he can reduce in a proportionate degree the several items of cost, the enterprise must soon fail to be remunerative. Miners cannot be classed as day workmen ; they are not limited to produce a certain amount of work, and there may be various rates paid per ton at one time in the same mine. To effect the required modifications and adapt the wages of the workmen to meet these variable commercial changes is often difficult. For in such cases the producer of iron has not only to compete with those engaged in the same trade with himself, but he has to meet in the labour market with those who, if wholly engaged in the coal trade, may have no immediate interest in either lowering the price of coal or making such changes as may affect the production of it; and in the same way with a flourishing iron trade the state of matters may to a certain extent be reversed.

On the other part it is not surprising if workmen employed in the same description of labour, in mines adjoining and worked under exactly the same conditions, should not be able to discriminate clearly at all times why they do not receive an equal rate of remuneration for it, and when the only apparent difference to them may be that the produce of the one mine is consumed in the manufacture of iron, and the produce of the other for household use and manufactures generally.

Under these circumstances I am afraid it is too much to expect that such changes will ever be made quite amicably and to the satisfaction of all parties ; and I apprehend that it is greatly owing to this peculiar state of things—two distinct mining interests not always alike active and remunerative—that there are so many vexatious disputes often resulting in strikes throughout the collieries of this district.

Though the number of collieries in operation has been similar to 1865, the get of coal has been sensibly reduced. This has been principally owing to a regulation introduced by the workmen at many of the works for diminishing the daily output per man, from a fourth to a fifth, and also from the reduced make of pig iron for the latter half of the year.

Guided by reliable returns, which I have obtained from nearly every colliery owner in the district, of the number of persons employed and the quantity of coal produced, it appears that the average number of persons employed in and about the coal mines for 1866 was 20,046, and the quantity of coal and dross produced, or the exhaustion of the mines, has been equal to 5,934,638 tons.

The fatal accidents in and connected with these works have been 43, resulting in the loss of 45 lives. Of these 23 were married men, 12 were unmarried, and 10 were boys.

The accidents classified under four heads, in the usual form, will be found shortly detailed in schedule No. 1., and the following is an abstract of it.

Year.	Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous and above ground.	Total Loss of Life.	Output of Coals.	Deaths per Million tons of Coal raised.
						Tons.	
1866	2	27	14	2	45	5,934,638	7·5

The liability to accidents appears to be greater in some parts of the district than in others, and the following statement shows the comparative loss of life per thousand persons employed during 1866 in the several counties comprised in the Western district of Scotland.

——	Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous and above ground.	Total Loss of Life.	Number of Persons employed.	Loss of Life per 1,000 Persons employed.
Lanark (lower division) -	2	6	5	1	14	8,579	1·64
Ayrshire - - - - -	—	18	6	1	25	9,100	2·74
Stirling (west division) -	—	2	—	—	2	923	2·16
Dunbarton - - - - -	—	1	2	—	3	689	4·36
Renfrew - - - - -	—	—	1	—	1	399	2·50
Dumfries and Argyle - -	—	—	—	—	—	356	0·00

The fatal accidents in the ironstone mines of the coal measures, and worked in connection with coal, or with any disused or exhausted coal mine, were four, causing the loss of four lives.

These accidents are shortly detailed in schedule No. 2.

Abstract of loss of Lives in Ironstone Mines.

Year.	Explosions.	Falls of Ironstone and Roof.	In Shafts.	Miscellaneous and above ground.	Total.
1866 - -	1	1	—	2	4

It is satisfactory to observe that the number of colliery accidents has been considerably less during the past year than for the preceding one, and that the loss of life from explosions of firedamp, two boys, is the smallest number I have had occasion to report. This important division of colliery management, the ventilation and mode of dealing with firedamp, is receiving more attention. I refer in particular to the more systematic examination of the collieries by duly appointed persons, with safety lamps in the mornings, before the workmen are allowed to enter them.

The accidents from falls of coal and roof, forming 60 per cent. of the whole, are greatly in excess. These unfortunate occurrences, with one exception, happened to the sufferers while working at the coal, or while engaged securing the roof, and working under it.

It will be seen that it is principally to dangers of this description that the miners of this district are exposed, and the precautionary measures, such as "spragging" the coal and securing the roof while working under it, are duties which they take upon themselves to perform. Workmen of experience, and trained to mining, ought to be better able to protect themselves; but from observations I do not find that they are more cautious or less subject to such accidents than the inexperienced. Many of these occurrences were purely accidental, and humanly speaking could not have been anticipated; but it was painfully evident when investigating into the particulars of others, that not a few of them might have been prevented by ordinary care on the part of the sufferers themselves. This description of accident is peculiar to all systems of working, though the risk is probably less under the "longwall" system, and referring to the following table, it will be seen that under similar conditions such accidents are by no means uniform.

Number of lives lost by falls of coal and roof for the last 11 years:—

1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.
26	16	16	25	22	21	26	19	15	28	27

In shafts the accidents have been numerous, and four of them happened at "mid-workings" by persons falling from them. Such arrangements as are generally made at midworkings are unavoidably dangerous; and it is not possible to construct any efficient check which will at all times secure the safety of the persons who may be employed at them. The safe and simple way to work two seams of coal at the same time out of one shaft is to arrange a scaffold over one division of it, at the midworking, leaving the other open, but fenced off so as to prevent any person from falling into it; or to concentrate the operations by cross-cut mines, so as to avoid separate landings. The strongest evidence of the insecurity and danger which attend these workings is the fact that several bottomers, whose business is to keep order and prevent irregularities, have themselves fallen victims.

I do not think that such an accident can properly be said to be occasioned by carelessness; it is more an act of momentary absence while engaged at a very dangerous description of work; and I believe that until it is prohibitory to "cleek" coals at an "open shaft" without a fixed scaffold, that loss of life from such causes will not be prevented. The change suggested is inexpensive; it would neither interfere with mining operations, nor press hard upon any individual owner, and it would have the effect of thoroughly putting a stop to this class of *preventible* accidents which for the past year formed 9 per cent. of the whole.

The accidents, miscellaneous and above-ground, were two. A boy in charge of a pony under-ground had from some cause fallen off the train of loaded hutches while in motion, and was crushed under it. And a young lad, employed at a pumping engine, had, while in the act of oiling the machinery, got entangled with it, and was fatally injured before he could be relieved.

All fatal mine accidents are reported, and receive my attention; but it is only those comprised under the statute which are here taken notice of.

The non-fatal accidents reported from all mines though still numerous have decreased for the last two years.

Year.	Explosions.	Falls of Coal, Ironstone, and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total of Non-fatal Accidents in Coal and Ironstone Mines.
1862 -	84	85	11	35	6	221
1863 -	88	97	10	38	6	239
1864 -	105	117	10	27	7	266
1865 -	74	79	8	32	10	203
1866	In Collieries 31 „ Ironstone Mines 29	77	14	24	8	183

I do not know that they are reported in such a way as to convey a correct idea of all the casualties which take place in mines, for while some owners report all accidents, there are others who only report cases of serious personal injury.

There is nothing calling for special observation about any of the accidents which have happened during the past year, or to which attention has not been frequently directed when referring to parallel cases in previous reports. It may be useful, however, to those more directly charged with the management to give a few particulars of the more prominent cases, and the following have been selected from schedules 1 and 2.

Accident No. 1, *schedule No.* 1, *was occasioned by a part of the shaft falling in while the deceased was engaged securing it.*

There are three seams of coal worked in this pit, the first at 38 fathoms, the second at 40 fathoms, and the third at 78 fathoms. It appears that the shaft which was mostly "wooded" or "barred" between the two upper seams had shown symptoms of failure for some time previous to the accident. That is there was an apparent pressure upon the wood from behind and forcing it inwards. It had been arranged by the general manager and the deceased that the "barring" at that part of the shaft should be overhauled and renewed at the new-year holidays. Accordingly preparations were made, and the deceased, in company with three assistants, descended the shaft to make the alterations required. Before beginning operations they had formed a scaffold at the second coal for the purpose of standing upon, and a partial scaffold had been erected a few feet higher up. After making these arrangements I understand that they had commenced to relieve, and had relieved, part of the "midwall" for the purpose of inserting stronger "side barring," and, while they were doing that, part of the old barring thus relieved was forced into the shaft by the pressure from behind, and carried away the lower scaffold, and the deceased who was standing upon it, to the bottom of the shaft. The assistants in some way managed to scramble into the "doorhead" at the mid seam, and were afterwards drawn safely to the surface.

In pit work, such as repairing shafts, it is difficult to lay down any particular regulations as to how it should be done; but the usual and safe way to make such repairs is to commence at the surface and proceed downwards.

Accident No. 6, *schedule No.* 1, *was occasioned by a fall of roof.*

On the morning of the accident, when a few of the workmen engaged at taking out pillars were passing to their work they discovered that the roof during their absence had fallen, and shut up one of the openings leading into a working place. On further examination, they had considered it advisable to remove at once the rails and other implements, in anticipation of a second fall of roof, and the oversman was sent for to advise as to further proceedings. I understand that the oversman was satisfied with what had been done, and directed the persons who worked in the place to abandon it for a time.

The usual crushing or breaking of the overlying strata under such conditions generally gives a certain amount of warning before an extensive fall of roof happens. It is possible that these premonitory symptoms may take place at night, or during the absence of the workmen, at all events there appears to have been very little warning in this case, for before the persons could rush out, who were really sitting at a supposed safe distance, observing the action of the fractured strata, a large mass of roof fell, and four of them were crushed under it. Two were rescued, but the deceased, of whom the oversman was one, if not killed instantaneously, were dead before they could be taken out.

Accident No. 7, *schedule No.* 1, *was occasioned by falling from a mid-working.*

There are two seams of coal worked at this pit, about 20 fathoms distant from each other. In the upper seam the operations were confined to a single place, worked by two men, and were of an exploring or experimental kind. It was the custom to send notice to these two workmen, when the day's work was finished in the under seam, and it appears that the deceased had on two occasions accompanied the person who had been sent for that purpose. On the evening of the accident he had been lowered to the upper seam, in company with a young man who worked in the pit; they were safely landed, and proceeded to the place where the two men worked, which was near to the pit-bottom. It was explained, by the men, that he remained only a few minutes in their place, as they were ready to leave, and he passed out towards the pit, with a light, slightly in advance of them. They heard a noise as they approached the shaft, but saw no light, and the impression was that the light which the deceased carried when he left the face had gone out, and in advancing towards the shaft he had unknowingly walked into it, and fallen to the bottom.

Accident No. 8, *schedule No.* 1, *was occasioned by falling from the cage whilst ascending.*

The deceased was a drawer, and on the day of the accident, after taking a full hutch to the pit-bottom, he had arranged with the bottomer to be raised to the surface. It appears that he got properly on to the cage, and was signalled to be raised in the usual way. There was no evidence to show how the accident happened. The engineman felt a check after raising the cage about four fathoms from the pit-bottom, and the idea seems to be that the deceased had got entangled with the shaft, which displaced the cage, and allowed him to fall past it to the pit-bottom.

Accident No. 12, schedule No. 1, was occasioned by getting entangled with the pumping machinery when attempting to oil it.

The deceased was an engine boy, and his duty was to keep the pumping machinery in motion, to suit the required drainage of the mine. I understand that he had reached the pit on the day of the accident in good time to enter upon his duties before the day engineman left. He started the pumping machinery, and it had been in operation for about ten minutes before the accident took place. It is supposed that he was in the act of oiling it, when he got caught between the wheel upon the pumping shaft and the wall upon which the shaft rested.

A great many of the accidents from machinery are occasioned by the persons injured injudiciously oiling the parts while in motion. I have often called attention to this dangerous and absurd practice, but without much effect. Pit machinery is often arranged so that there is very little space between the gearing and other moveable parts. It should never be oiled when in motion, and until such a regulation is strictly observed by the enginemen, this description of accident will continue to happen.

Accident No. 19, schedule No. 1, was occasioned by a fall of stones from the side of a sinking shaft.

This shaft is in the act of being sunk, and at the time of the accident it was 40 fathoms deep. The shaft fittings and general arrangements are of the usual description. The sinking is advanced with three shifts in the 24 hours. It appears that the shift of men which preceded the deceased, on the day of the accident, had their attention directed to a part of the shaft where some loose stuff had fallen from. They had examined it, and before leaving secured it with wood. The deceased and their companions who were engaged in the bottom of the shaft when the accident happened, had worked for about three or four hours, and I understand that they had not been aware of any defect in the shaft at the time. Apparently the part of the shaft where the stone fell from, and by which the two unfortunate sufferers were fatally injured, was about seven fathoms from the pit-bottom, where a small "lype," not readily observed, crossed the "dip" end of the shaft. Under any condition, sinking is a dangerous occupation, and the only security from falls of stones or otherwise is to keep up a regular and careful system of examination.

Accident No. 23, schedule No. 1, was occasioned by pushing an empty hutch into the shaft.

The deceased was a young lad about 15 years of age, and it was his business to assist the pitheadman. On the day of the accident he had been engaged with others taking off some hutches of "redd" from the "rise" cage at the low scaffold. These hutches required to be taken a short distance from the pit-mouth to be emptied, when they were afterwards pushed back and placed upon the cage in the ordinary way. The low scaffold is from 15 to 20 feet below the upper scaffold, and I understand that the "rise" cage had been raised during the absence of the deceased to the upper scaffold. In returning with the empty hutch, unfortunately, he had neglected to observe the changed situation of the cage, and pushed the "hutch" into the shaft, and fell with it to the pit-bottom a distance of 54 fathoms.

Accident No. 25, schedule No. 1, was occasioned by falling from a mid-working.

In this case it was the duty of the bottomer to see the hutches placed properly upon the cage and to make the appointed signals necessary for regulating the ascent of the same. I understand that at the time of the accident a cage had been lowered to the level of the "mid-working," and the deceased had taken the empty or return hutch off it, but in removing a full hutch to be sent up on the cage, he had inadvertently pushed it into the wrong division of the shaft, where of course there was no cage to receive it, and fell with it to the pit-bottom a distance of 12 fathoms.

Accident No. 26, schedule No. 1, was occasioned by the cage being lifted without a signal.

The pit is 38 fathoms deep. The deceased was a young lad about 15 years of age. It appears that on the morning of the accident he had been at the pit-bottom along with others, and for the purpose of getting to the pit-head to arrange for some empty hutches, he had made the usual signal *three*, which, according to the special rules, is the proper signal to make when men are requiring to be raised. The engineman did not make a return signal, but commenced to raise the cage, and the deceased, when he saw that it was about to be raised, attempted to get on to it and was drawn away partly in the cage to a distance of about 10 fathoms, when he fell back to the bottom. The signal *one*, and afterwards the signal two, were made from the pit-bottom for the purpose of arresting the cage and causing it to be sent back, but without effect. It was wrong on the part of the boy to go on to the cage before he received a proper back-signal, but the engineman failed altogether in his duty: first, in lifting the cage without having given and received the proper signal for men to be raised; and second, in not stopping the engine without delay, after having got the proper signal to do so.

The Procurator Fiscal, Kilmarnock, charged the engineman with culpable homicide; he was tried by Sheriff Anderson and a jury, found guilty, and sentenced to two months' imprisonment.

Accident No. 38, *schedule No.* 1, *was occasioned by an explosion of fire-damp.*

The workings of this pit are limited, and mostly of a preparatory kind. A stone mine has been in the course of extension for a considerable time, with the view of forming a communication with a second shaft, and about 100 fathoms from the pit the coal was intersected. A level was commenced in the coal for the purpose of completing the connection, and occasionally rents or openings in the strata, apparently in connection with one of the main dislocations of the district have been opened, from which gas is freely discharged. Shortly before the accident the work was partly interrupted by a small dislocation. The contractor for the mine was the only person engaged at the "face" on the day of the accident, clearing away coals which had accumulated, and he worked with a safety-lamp. According to his information, a short time before the accident happened, the gas became so strong at the face that he left it, and went out to what he supposed a safe distance and there uncovered his safety-lamp. As to how the gas ignited is doubtful; the contractor was of opinion that one of the boys who drew the coals from the end of the stone mine to the pit-bottom ignited it when returning with an empty hutch. Six of them were burned, it was considered slightly, but the deceased, a young lad, died a few days after from the effects of it. An opening, checked by canvas, had been formed off the side of the mine by the oversman a day or two previous to the accident. It must have had the effect of diminishing the ventilation at the face, and, under the circumstances, was an injudicious arrangement. There is always a risk in working places with mixed lights, and the present case is a fair illustration. The opening has since been extended to the required limit by the use of locked safety-lamps.

Accident No. 40, *schedule No.* 1, *was occasioned by falling down the shaft.*

The deceased was an assistant pitheadman, and it was his duty to take the loaded hutches off the cage at the pit-head and to return the empty ones. It appears that at the time of the accident he had been engaged taking an empty or return hutch to the pit for the purpose of placing it upon the cage, when apparently from some momentary absence of mind, he pushed the hutch into the wrong division of the shaft and fell to the bottom with it.

Accident No. 43, *schedule No.* 1, *was occasioned by an explosion of fire-damp.*

The deceased was employed along with two workmen (Newton and Hunter) driving a mine over a dislocation, and the air was conducted into it for a considerable distance by brattice. It appears that they had been desirous of getting to their work early on the morning of the accident, and had requested the fireman to make an early examination of their place, so as to allow them to get into it. The fireman asserts that he did make the examination and found the place in working order. From some cause they did not get to their work so early as they had anticipated; but two workmen who were employed near to this mine, when they entered to their work, observed that a fall of roof had partly destroyed the aircourse or "brattice" by which the air was conducted into Newton's mine, and they properly called the attention of Newton and Hunter to it when they were passing to their work. It appears that in working this mine a slight quantity of gas was given off, particularly at the "veise" of the dislocation, a few feet from the face, and the roof being high there, eight to ten feet, it had a tendency to collect in it. Newton and Hunter were practical men, and acquainted with the usual condition of the mine, and I understand that when they became aware of the broken brattice on the morning of the accident, they prepared to pass in to a point where they kept a safety lamp (about seven fathoms beyond the broken brattice), and one of them had reached the lamp, with a naked light, by keeping it low, and was in the act of preparing it for use when his neighbour, who followed him, carrying his light either on his head or at a higher level, ignited the gas which lay along the roof to the rise, when they were all burned less or more, and the deceased, a young lad, died from the effects of it about two weeks after.

The workmen in this case exposed themselves unnecessarily, though it is apparent that if the second had taken the same amount of precaution as the first the accident would have been prevented. However, under the circumstances the proper and safe way would have been to call the attention of the oversman or fireman to the broken brattice, and remained out of the place till it was examined and reported safe to work in.

Accident No. 1, *schedule No.* 2, *was caused by getting entangled with the pumping machinery.*

The deceased was engineman, and at the time of the accident he was alone, and attending to the pumping machinery. It is supposed that he had been attempting to drive a wedge between the " key " and the " plumber " block of the pumping shaft, when he was caught by the revolving pinion wheel, and crushed between *it* and the wheel into which it was geared.

It seems unaccountable that enginemen, after so many warnings, should continue to expose themselves unnecessarily to so much risk, by oiling and working about the parts of the machinery while in motion, when by stopping it for a few minutes the work could be done deliberately and without risk.

Accident No. 2, *schedule No.* 2, *was accasioned by an explosion of fire-damp.*

The deceased and his boy worked in an isolated part of the mine. I understand that the fireman had examimed it on the morning of the accident, and found it in a workable state. It appears that the manager had also gone into it shortly after the deceased commenced to his work, and afterwards passed up to a dislocation, which lay along the " rise " side of the place, and along which the return aircourse was formed. In returning his lamp ignited some gas which had collected in a high part of the roof by which he was slightly burned. The deceased, who it appears had left his working place and was near to the manager, was also burned. The quantity of gas in this case must have been very limited, and it is supposed that death resulted from injuries received when struggling to get back out of the airway, which being formed over a dislocation was steep and somewhat difficult to travel through.

The Act 25 & 26 Vict. c. 79. to which I referred in my last report, has not yet been fairly complied with. The statute is explicit in the prohibition of single shafts; but it is perhaps proper to explain that by the existing mode of enforcing compliance, endless opposition can be given to it. For example, the Procurator Fiscal of Kilmarnock in April 1865, three months after the Act came into operation, was instructed by the Lord Advocate to take proceedings in the Sheriff Court against the Owners of Maxwood Colliery for the purpose of enforcing compliance by interdict or injunction. In Scotland these cases are proceeded with in civil form, not criminally; under such circumstances it is apparent that if there is a desire to protract the litigation and delay the decision, there are many ways of doing it. In the present case objections were taken to the jurisdiction of the Sheriff and to the title of the Procurator Fiscal to sue, and various technical points were started which, though of no consequence, tended greatly to delay the proceedings; and being all conducted before the Sheriff Substitute various appeals were made to the Sheriff Principal. After all preliminaries were arranged, a proof was allowed, which was not closed till the end of 1865, and on January 31st, 1866, the Sheriff Substitute granted interdict. The judgment of the Sheriff Substitute was reviewed by the Sheriff Principal, and confirmed in March 1866. The next proceeding was to appeal to the Court of Session, where the case has been litigated since, and on the 31st January 1867 the decision of the Lord Ordinary, adhering to the judgment of the Sheriff and Sheriff Substitute was declared. It is still in the power of the defendants to carry the case to the Inner House of the Court of Session, and if the judgment there be still unfavourable they may carry it to the House of Lords.

During these proceedings the owners of the colliery in the latter part of 1866 completed their connections, by which a second means of egress was made from the various workings of the colliery. There is no penalty of any consequence attached in case of violation of this statute, and the only thing likely to deter any one who may not wish to comply immediately with the requirements of it, is the expense which must ultimately be incurred for carrying on the litigation.

I presume the Legislature never contemplated that the salutary effects of the statute might be set aside for years, in the case of any litigious owner who might choose to follow the course which has been adopted in this case; and I would suggest that, in the event of any change in the law relating to mines, something more stringent and effective should be introduced, which, if it did not enforce immediate compliance would have the effect of preventing such unnecessary and vexatious delays. As the law now is, such cases may be taken from court to court, and it is possible that while appeals are being made some unfortunate accident may happen, and for want of a second outlet sweep off the whole of a pit's crew.

There are other two cases at present being conducted similar in form to the one described.

The mines were " existing mines " at the passing of the Act in 1862. And up to this time they have been worked in wilful violation of the statute; and the workings in both cases are *closely* situated to old mines lying *full* of *water*.

Such acts of violation have a bad effect in a mining district, and particularly in such cases as the present, where a few mine owners are apparently exempted from outlays such as their neighbours, who in rendering a full compliance with the statute, have been obliged to make.

The general rules of the statute 23 & 24 Vict. c. 51. are binding upon all colliery owners, and in the case of violations there is a penalty of 20*l.*; and also, in case the default or neglect be not remedied with all reasonable despatch after notice in writing thereof given by an Inspector to the owner or agent of such coal mine to a further penalty of 1*l.* for every day during which the offence continues after such notice. I am of opinion that there should also be a penalty of at least 20*l.* for violation of the statute 25 & 26 Vict. c. 79., and, in addition to the injunction provided for by the sixth section of the statute, a penalty of 5*l.* per day for every day during which the offence continues after notice thereof has been given.

Such a provision would not interfere with any one honestly trying to do right, it would have the effect of checking or preventing endless litigation, and the result would be that a more rigid and systematic compliance with the statute would be obtained.

I had occasion to lay before you a decision of Sheriff Strathearn's, given in the Sheriff Court, Glasgow, relating to the 15th general rule of the statute 23 & 24Vict. c. 151. In his interlocutor attention is called to the uncertain meaning of the term " a working." As this rule is undoubtedly one of the most important of the general rules, it ought to be expressed so as not to admit of doubt as to its meaning, and I would suggest that the following be substituted for it :

15. Every place likely to contain a dangerous accumulation of water shall be approached by narrow mines, or places not exceeding 12 feet wide, in which there shall be at least one bore hole kept constantly in advance not less than 12 feet, and with flank bores on each side never more than 10 feet distant from the face, and not more than 10 feet distant from each other.

I have, &c.
WILLIAM ALEXANDER,
Inspector of Mines.

To the Right Hon. S. H. Walpole, M.P.,
Her Majesty's Secretary of State, London.

SCHEDULE No. 1.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS OF LIFE arising therefrom, in the WESTERN DISTRICT of SCOTLAND, during the Year ended 31st December 1866.

Date.	No. of Accident.	Name of Colliery.	Where situate.	Owners' Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost.					
									Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total.
1866.														
Jan. 4	1	Provanhall	Baillieston	Provanhall Coal Company	William Prentice	Oversman	38	Part of the shaft falling in while he was engaged securing it.	–	–	1	–	–	1
,, 27	2	Swineridgemuir	Beith	Merry and Cunningham	John Ford	Collier	28	Fall of roof in his working place	–	1	–	–	–	1
,, ,,	3	Hurlford, No. 12	Hurlford	Allan Gilmour and Co.	David George, boy	Ditto	14	Fall of roof at face	–	1	–	–	–	1
Feb. 1	4	Duncanziemer	Cumnock	Dunsmuir and McDougal	John Dunsmuir	Sinker	34	Killed whilst being drawn up the pit (a sinking pit) from a "shot."	–	–	1	–	–	1
,, 14	5	Heathery Knowe	Baillieston	Heathery Knowe Coal Company.	John Wotherspoon, boy.	Pithead Assistant.	15	Pushed a hutch into the shaft, and fell to the bottom with it.	–	–	1	–	–	1
,, 26	6	Bank	New Cumnock	Bank Coal Company	Thomas Patrick	Oversman	44	Fall of roof	–	1	–	–	–	1
,, ,,	,,	Ditto	Ditto	Ditto	Matthew Morrison	Collier	36	Ditto	–	1	–	–	–	1
Mar. 17	7	Barleith	Hurlford	John Galloway and Co.	Francis Martin	Furnace boy	13	Fell down the shaft from the "M'Naught" to the "Major Coal."	–	–	1	–	–	1
,, 30	8	Corsel	Kilwinning	Eglinton Iron Company	William McCrae	Collier	22	By falling from the cage while ascending the shaft.	–	–	1	–	–	1
April 3	9	Baltic Pit	Hurlford	John Howie	Joseph Erskine	Ditto	38	Fall of coal while holing it	–	1	–	–	–	1
,, 23	10	Opencast, No. 2	Coatbridge	William Baird and Co.	James Thomson	Ditto	29	Fall of roof while forming a roadway through an old waste.	–	1	–	–	–	1
,, 24	11	Palacecraig, No. 6	Airdrie	Ditto	George Hammel	Ditto	50	Fall of roof in his working place	–	1	–	–	–	1
May 5	12	Fergushill	Kilwinning	Archibald Finnie	James Faulds	Engineman	16	Got entangled with the pumping machinery.	–	–	–	–	1	1
,, 19	13	Annbank, No. 4	Ayr	T. F. Gordon	John O'Hara	Brusher	36	Fall of roof while redding under it	–	1	–	–	–	1
,, 29	14	Prince of Wales	Stevenston	Merry and Cunningham	Robert Marr	Collier	20	Fall of roof at face	–	1	–	–	–	1
June 2	15	Redburn	Kilwinning	Eglinton Iron Company	John Fairlie	Brusher	26	Fall of roof while engaged working under it.	–	1	–	–	–	1
,, 5	16	Strone	Kilsyth	William Wallace	John Ferns	Collier	45	Fall of roof at face	–	1	–	–	–	1
,, 15	17	Springside	Dreghorn	Archibald Kenneth	Jamas Scobbie	Ditto	40	Ditto	–	1	–	–	–	1
,, 16	18	Plan	Kilmarnock	John McKnight	James Marshall	Ditto	32	Fall of coal and roof at face	–	1	–	–	–	1
,, 22	19	Meiklehill	Kirkintilloch	James Gairdner	David Barr	Sinker	25	Fall of stone from the side of a sinking shaft.	–	–	1	–	–	1
,, ,,	,,	Ditto	Ditto	Ditto	Carrick Hamilton	Ditto	22	Ditto	–	–	1	–	–	1

SCHEDULE I.—List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accident.	Name of Colliery.	Where situate.	Owners' Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives Lost. Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total.
1866.														
June 26	20	Ellismuir	Baillieston	Bredisholm Coal Company	Dennis Coogans	Drawer	18	Fall of roof in his drawing road	–	1	–	–	–	1
July 16	21	Hurlford	Hurlford	John Howie	Cunninghame Reid	Collier	24	Fall of roof	–	1	–	–	–	1
„ 18	22	Annandale	Kilmarnock	Archibald Finnie	James Neil	Ditto	46	Ditto	–	1	–	–	–	1
„ „	23	Wheatyfauld	Bath	Merry and Cunningham	Wm. Cunninghame, boy.	- - -	15	Fell down the shaft by pushing the hutch in to the wrong side.	–	–	1	–	–	1
„ 26	24	Cardowan	Shettleston	Andrew Yeates and Co.	Daniel Haggarty	Ditto	13	Fall of roof	–	1	–	–	–	1
Aug. 4	25	Heathery Knowe	Baillieston	Blochairn Coal Company	John Mathieson	Bottomer	55	Fell down the shaft from a mid working.	–	–	1	–	–	1
„ 14	26	Bourtreehill	Dreghorn	Bourtreehill Coal Company	James Anderson, boy.	- - -	14	Caught between the cage and side of shaft. Cage lifted without a proper signal.	–	–	1	–	–	1
„ 21	27	Holmes	Galston	John Horne	William Nisbet	Collier	28	Fall of roof	–	1	–	–	–	1
„ 22	28	High Possil	Glasgow	M. Wallace and Co.	Charles Aitken	Ditto	60	Fall of coal and roof	–	1	–	–	–	1
„ 25	29	Thornton	Kilmarnock	Archibald Finnie	John Humphrey	Ditto	19	Fall of roof	–	1	–	–	–	1
Sept. 8	30	Gauchalland	Galston	Gauchalland Coal Company	Michael McGee	Ditto	22	Ditto	–	1	–	–	–	1
„ 10	31	Espieside	Coatbridge	William Baird and Co.	William Aitken	Pony driver	15	Fell before a train of loaded hutches and was run over by them.	–	–	–	1	–	1
„ 21	32	Coney Park	Denny	John Barr	William Hannah, boy	- - -	12	Fall of coal at face	–	1	–	–	–	1
„ 29	33	Blair	Dalry	Eglinton Iron Company	Patrick Doolan	Brusher	50	Fall of roof while engaged working under it.	–	1	–	–	–	1
Oct. 1	34	Bogleshole	Tollcross	James Dunlop and Co.	James George	Bottomer	43	Fell down the shaft from a mid-working.	–	–	1	–	–	1
„ 4	35	Commonhead	Baillieston	Forester and Robson	John Edwards	Sinker	45	Was injured in a sinking pit by the kettle falling upon him.	–	–	1	–	–	1
Nov. 26	36	Gauchalland	Galston	Gauchalland Coal Company	Colin Rankine	Oversman	20	Caught between the cage and the shaft while being lowered.	–	–	1	–	–	1
Dec. 8	37	Woodhill	Kilmarnock	Merry and Cunningham	Thomas Lind, boy	- - -	13	Fall of roof at the face	–	1	–	–	–	1
„ 13	38	Summerlee	Coatbridge	Wilsons and Co.	Hugh Carlin, boy	- - -	13	Explosion of firedamp. Died a few days after.	1	–	–	–	–	1
„ 26	39	Riskend	Kilsyth	William Baird and Co.	Alexander Connel	Collier	50	Fall of coal and roof.	–	1	–	–	–	1

Schedule I.—List of Fatal Colliery Accidents—*continued.*

Date.	No. of Accident.	Name of Colliery.	Where situate.	Owners' Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost. Explosions.	Falls of Coal and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total.
1866. Dec. 29	40	West Hurlet	Hurlet	John Wilson and Sons	Andrew Stewart	Assistant Pitheadman.	33	Fell down the shaft, by running a hutch in to the wrong side.	–	–	1	–	–	1
,, ,,	41	Palacecraig	Airdrie	William Baird and Co.	William Mulligan	Collier	25	Fall of roof	–	1	–	–	–	1
,, ,,	42	Gauchalland	Galston	Gauchalland Coal Co.	James White	Ditto	22	Fall of coal at face	–	1	–	–	–	1
,, ,,	43	Rosehall	Coatbridge	Robert Addie	John McKay	Ditto	17	Explosion of fire-damp. Died 12 days after the explosion.	1	–	–	–	–	1
									2	27	14	1	1	45

SCHEDULE No. II.

List of the Fatal Accidents in Ironstone Mines, and Loss of Life arising therefrom, in the Western District of Scotland, during the Year ended 31st December 1866.

Date.	No. of Accident.	Name of the Mine.	Where situate.	Owners' or Agents' Names.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost in Ironstone Mines. Explosions.	Falls of Ironstone and Roof.	In Shafts.	Miscellaneous.	Above Ground.	Total.
1866. Jan. 3	1	Neilston Mine	Kilsyth	William Baird and Co.	Robert Nicol	Engineman	25	Got entangled with the pumping machinery.	–	–	–	–	1	1
Sept. 5	2	Cadder, No. 9	Bishop Briggs	Carron Iron Company	James Moore	Miner	36	Explosion of fire-damp	1	–	–	–	–	1
,, 10	3	Lochside	Kilburnie	Merry and Cunningham	James Cook	Ditto	50	Fall of ironstone at face	–	1	–	–	–	1
Oct. 3	4	Neilston Mine	Kilsyth	William Baird and Co.	William Jamieson, boy.	-	15	Got entangled with an empty hutch upon an incline.	–	–	–	1	–	1
									1	1	–	1	1	4

Mr. Verner's Report.

REPORT as to the MINE INSPECTION ACT in the NORTHUMBERLAND, &c. DISTRICT, from 7th November to 31st December 1866.—By ALBERT VERNER, Esq.

2, Carlton Place, Newcastle-on-Tyne,
February 27, 1867.

SIR,

As Her Majesty's Inspector of Mines for the Northumberland &c. District, I beg herewith to hand you an account of the fatal accidents that occurred in this district, since my appointment on the 7th November up to the 31st December 1866.

Amongst them there are none that require any especial remark from me, beyond stating that the one death by explosion of gas at Blaydon Main was caused by the wilful disobedience of the poor man Tonkin, who thereby lost his life.

My appointment being of such very recent date, I think it will be more judicious for me to make no further remark, as I do not yet know the district sufficiently well to report upon it.

I remain, &c.
(Signed) ALBERT VERNER.

The Right Hon. Spencer H. Walpole, M.P.,
Principal Secretary of State, Whitehall.

LIST of the FATAL COLLIERY ACCIDENTS, and LOSS of LIFE arising therefrom, in the NORTHUMBERLAND &c. DISTRICT, from the 7th November to the 31st December 1866.

Date.	No. of Accidents.	Name of Colliery.	Where situate.	Owner's or Agent's Name.	Persons killed.	Occupation.	Age.	Cause of Death, and Remarks.	Number of Lives lost.					
									Explosions.	Falls of Roof.	In Shafts.	Miscellaneous.	Above ground.	Total.
1867.														
Nov. 9	1	Workington	Workington	Irving and Co.	Thos. Hindmoor	Hewer	22	Fall of stone when setting timber	–	1	–	–	–	1
,, 17	2	Fenham	Newcastle	Bainbridge and Co.	H. Short	Ditto	–	Fall of stone	–	1	–	–	–	1
,, 17	3	Cowpen	Blyth	Straker, Cookson, and Co.	Edw. Bowart	Ditto	42	Fall of stone	–	1	–	–	–	1
,, 17					W. Bowart	Ditto	40	Fall of stone	–	1	–	–	–	1
,, 19	4	East Holywell	Newcastle	Taylor and Co.	J. Nicholson	Driver	12	Crushed by tubs	–	–	–	1	–	1
,, 20	5	Seaton Delaval	Ditto	Lamb, Burdon, and Co.	J. Henderson	Ditto	13	Crushed by tubs	–	–	–	1	–	1
,, 24	6	Blaydon Main	Ditto	Ramsay and Co.	J. Tonkin	Shifter	33	Explosion of gas	1	–	–	–	–	1
,, 22	7	MickleyColliery	Gateshead	Cookson, Liddle, and Co.	R. Robson	Driver	13	Crushed by tubs	–	–	–	1	–	1
,, 29	8	Clifton	Workington	Fletcher and Co.	J. Wilson	Banksman	53	Fall down shaft	–	–	1	–	–	1
Dec. 12	9	Ashington	Morpeth	Dickinson and Co.	W. Temple	Driver	15	Run over by tubs	–	–	–	1	–	1
,, 14	10	Cramlington	Newcastle	Lamb, Potter, and Co.	J. Keelor	Sinker	13	Crushed by tubs	–	–	–	1	–	1
,, 14	11	Tanfield Moor	Gateshead	Joicey and Co.	M. Pringle	Stoneman	29	Explosion of powder	–	–	–	1	–	1
,, 17	12	Graysouthern	Maryport	Harris and Co.	G. Cameron	Hewer	30	Fall of stone or top coal	–	1	–	–	–	1
,, 18	13	Beamish	Chester-le-Street	J. Joicey and Co.	J. Fletcher	Ditto	55	Fall of stone	–	1	–	–	–	1
,, 19	14	Bewicke Main	Gateshead	Hunt, Perkins, and Co.	J. Barker	Driver	10	Crushed by tubs	–	–	–	1	–	1
,, 27	15	Shipcote	Ditto	Marley Hill Company	J. Charlton	Hewer	56	Fall of stone	–	1	–	–	–	1
,, 31	16	Felling	Ditto	Elliot and Co.	W. A. Jewett	Trapper	11	Crushed by tubs	–	–	–	1	–	1
								Total	1	7	1	8	–	17

In consequence of the state of his health, Mr. Morton resigned his appointment as an Inspector of Mines at the end of last year, and has been totally unable to make a Report.

Home Office, March 20, 1867.

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